# WEST Search History

DATE: Tuesday, September 17, 2002

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| | *DB=USPT,PGPB,JPAB,DWPI; PLUR=YES; OP=ADJ* | | |
| L2 | L1 same (fusion or conjugat$ or chimer$ or heterolog$) | 18 | L2 |
| L1 | antennapedia same homeodomain | 71 | L1 |

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NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
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=> s antennapedia (3s) (homeodomain or DNA binding domain)
L1 487 ANTENNAPEDIA (3S) (HOMEODOMAIN OR DNA BINDING DOMAIN)

=> s l1 and (fusi? or chimer? or conjugat? or heterolog?)
L2 103 L1 AND (FUSI? OR CHIMER? OR CONJUGAT? OR HETEROLOG?)

=> s l2 and (non denatur?)
L3 0 L2 AND (NON DENATUR?)

=> s l2 and disulfide bond
L4 0 L2 AND DISULFIDE BOND

=> s l2 and NOI
L5 0 L2 AND NOI

=> s l2 and antigen
L6 6 L2 AND ANTIGEN

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 5 DUP REM L6 (1 DUPLICATE REMOVED)

=> d bib abs 1-
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L7 ANSWER 1 OF 5 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 1
AN 2001412104 EMBASE
TI Efficient delivery of ***Antennapedia*** ***homeodomain*** fused to CTL epitope with liposomes into dendritic cells results in the activation of CD8(+) T cells.
AU Chikh G.G.; Kong S.; Bally M.B.; Meunier J.-C.; Schutze-Redelmeier M.-P.M.
CS Dr. M.-P.M. Schutze-Redelmeier, Department of Advanced Therapeutics, British Columbia Cancer Res. Centre, 601 W 10th Avenue, Vancouver, BC V5Z 1L3, Canada. mpredelm@bccancer.bc.ca
SO Journal of Immunology, (1 Dec 2001) 167/11 (6462-6470).
Refs: 59
ISSN: 0022-1767 CODEN: JOIMA3
CY United States
DT Journal; Article
FS 026 Immunology, Serology and Transplantation
027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
LA English
SL English
AB The in vivo induction of a CTL response using ***Antennapedia*** ***homeodomain*** (AntpHD) fused to a poorly immunogenic CTL epitope requires that the Ag is given in presence of SDS, an unacceptable adjuvant for human use. In the present report, we developed a hybrid CTL epitope delivery system consisting of AntpHD peptide vector formulated in liposomes as an alternative approach to bypass the need for SDS. It is proposed that liposomes will prevent degradation of the Ag in vivo and will deliver AntpHD recombinant peptide to the cytosol of APCs. We show in this work that dendritic cells incubated with AntpHD-fused peptide in liposomes can present MHC class I-restricted peptide and induce CTL response with a minimal amount of Ag. Intracellular processing studies have shown that encapsulated AntpHD recombinant peptide is endocytized before entering the cytosol, where it is processed by the proteasome complex. The processed liposomal peptides are then transported to the endoplasmic reticulum. The increase of the CTL response induced by AntpHD-fused peptide in liposomes correlates with this active transport to the class I-processing pathway. In vivo studies demonstrated that positively charged liposomes increase the immunogenicity of AntpHD-Cw3 when injected s.c. in mice in comparison to SDS. Moreover, addition of CpG oligodeoxynucleotide immunostimulatory sequences further increase the CD8(+) T cell response. This strategy combining lipid-based carriers with AntpHD peptide to target poorly immunogenic Ags into the MHC class I processing pathway represents a novel approach for CTL vaccines that may have important applications for development of cancer vaccines.

L7 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 2001:431446 CAPLUS
DN 135:240582
TI Characterization of hybrid CTL epitope delivery systems consisting of the ***Antennapedia*** ***homeodomain*** peptide vector formulated in liposomes
AU Chikh, G.; Bally, M.; Schutze-Redelmeier, M.-P.
CS Systemic Therapy Program, Advanced Therapeutics, British Columbia Cancer Agency, Vancouver, BC, Can.
SO Journal of Immunological Methods (2001), 254(1-2), 119-135
CODEN: JIMMBG; ISSN: 0022-1759
PB Elsevier Science B.V.
DT Journal
LA English
AB Peptide carriers, such the ***homeodomain*** of ***Antennapedia*** mol. (AntpHD), which spontaneously cross cellular membranes, have been exploited to deliver antigenic peptide Cw3 to the major histocompatibility complex (MHC) class-I presentation pathway and to prime cytotoxic T cells (CTL). However, the in vivo use of AntpHD recombinant peptide has been limited because CTLs can only be primed in the presence of SDS as adjuvant. In this report, the authors have exploited liposomes to protect the AntpHD-Cw3 from serum degrdn. and to facilitate the delivery of the recombinant peptide into the MHC class-I pathway of ***antigen*** -presenting cells. The authors have demonstrated that AntpHD recombinant peptide spontaneously assocs. with liposomes and this assocn. is stable in vitro. However, exchange studies assessing the transfer of the peptide to model membranes or cells in vitro indicates that approx. 50% of the liposome-assocd. peptide is readily exchangeable. This is consistent with trypsin-protection assays, which have shown that approx. 40% of the liposome-assocd. peptide is protected from hydrolysis. Importantly,

macrophages and dendritic cells are able to internalize AntpHD recombinant peptide assocd. with liposomes resulting in efficient delivery of the CTL peptide into the cytosol. These studies have demonstrated that dendritic cells treated with AntpHD-Cw3 in liposomes sensitize CTL clones to lyse syngeneic target cells expressing Cw3 epitope. This strategy, which combines liposomes and a peptide vector, provides a new approach for introducing mols. into the MHC class-I ***antigen*** presentation pathway of dendritic cells.
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 2000:6202 CAPLUS
DN 132:320658
TI Presentation of T cell epitope by ***antennapedia*** ***homeodomain***
AU Schutze-Redelmeier, M. P.; Gournier, H.; Garcia-Pons, F.; Moussa, M.; Joliot, A. H.; Volovitch, M.; Prochiantz, A.; Lemonnier, F. A.
CS Departement SIDA-Retrovirus, Institut Pasteur, Paris, 75724, Fr.
SO HLA: Genetic Diversity of HLA Functional and Medical Implication, [Proceedings of the International Histocompatibility Workshop and Conference], 12th, Saint-Malo and Paris, France, 1996 (1997), Meeting Date 1996, Volume 2, 395-396. Editor(s): Charron, Dominique. Publisher: EDK, Medical and Scientific International Publisher, Sevres, Fr.
CODEN: 68MRA5
DT Conference
LA English
AB The authors investigated the immune potential of the ***antennapedia*** ***homeodomain*** (AntpHD; a 61 amino-acid peptide structured in 3 .alpha. helixes). As a model system they created a ***fusion*** peptide (AntpHD-pCw3) in which a T cell epitope (HLA-Cw3 mol. amino acids 170-179), bounded by processing permissive influenza virus NP protein-derived sequences, was linked to the AntpHD C terminus. C myc tag sequences were also included to follow the intracellular fate of the ***fusion*** peptide. This epitope is presented by H-2Kd mols. and recognized by a cytotoxic T cell clone (CAS20) isolated in the authors' lab. This system provides a direct access to the MHC class I-assocd. ***antigen*** processing pathway.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1996:408470 CAPLUS
DN 125:84014
TI Introduction of exogenous antigens into the MHC class I processing and presentation pathway by Drosophila ***antennapedia*** ***homeodomain*** primes cytotoxic T cells in vivo
AU Schutze-Redelmeier, Marie-Paule; Gournier, Helene; Garcia-Pons, Francois; Moussa, Marlene; Joliot, Alain H.; Volovitch, Michel; Prochiantz, Alain; Lemonnier, Francois A.
CS AIDS-Retrovirus Dep., Pasteur Inst., Paris, Fr.
SO Journal of Immunology (1996), 157(2), 651-655
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
AB The ***homeodomain*** of the ***Antennapedia*** mol. (AntpHD) spontaneously crosses cellular membranes and can be used to deliver up to 50 addnl. amino acids to the cytoplasm. We exploited this approach to deliver antigenic peptides to the MHC class I processing and presentation pathway. AntpHD-based ***fusion*** peptides expressing the 170-179 HLA-Cw3 CTL epitope (pCw3) were produced in bacteria. Incubation of these ***fusion*** peptides with H-2d target cells resulted in efficient delivery to the cytosol as indicated by protease resistance and confocal microscopy. Moreover, this introduction of an exogenous Ag resulted in sensitization of the cell to lysis by a CTL clone specific for the 170-179 HLA-Cw3-derived peptide. Sensitivity of the Ag processing to brefeldin A but not to chloroquine is consistent with the delivery of AntpHD ***fusion*** peptides to the conventional class I-assocd. processing pathway. Immunization of DBA/2 (H-2d) mice with AntpHD pCw3 ***fusion*** peptide in the presence of SDS primed H-2Kd-restricted HLA-Cw3-specific CTL. Similar results were obtained with AntpHD ***fusion*** peptides expressing the 147-156 influenza nucleoprotein peptide. The strategy outlined in this paper provides a new approach for introducing mols. into the MHC class I Ag-presenting pathway. This approach has clear relevance to the design of synthetic peptide-based vaccines.

L7 ANSWER 5 OF 5 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96211071 EMBASE
DN 1996211071
TI Introduction of exogenous antigens into the MHC class I processing and presentation pathway by Drosophila ***antennapedia*** ***homeodomain*** primes cytotoxic T cells in vivo.
AU Schutze-Redelmeier M.-P.; Gournier H.; Garcia-Pons F.; Moussa M.; Joliot A.H.; Volovitch M.; Prochiantz A.; Lemonnier F.A.
CS Unite Immunite Cellulaire Antivirale, Departement SIDA-Retrovirus, Institut Pasteur, 28 rue du Dr Roux,75724 Paris Cedex 15, France
SO Journal of Immunology, (1996) 157/2 (650-655).
ISSN: 0022-1767 CODEN: JOIMA3
CY United States
DT Journal; Article
FS 026 Immunology, Serology and Transplantation
LA English
SL English
AB The ***homeodomain*** of the ***Antennapedia*** molecule (AntpHD) spontaneously crosses cellular membranes and can be used to deliver up to 50 additional amino acids to the cytoplasm. We exploited this approach to deliver antigenic peptides to the MHC class I processing and presentation pathway. AntpHD- based ***fusion*** peptides expressing the 170-179 HLA-Cw3 CTL epitope (pCw3) were produced in bacteria. Incubation of these ***fusion*** peptides with H-2(d) target cells resulted in efficient delivery to the cytosol as indicated by protease resistance and confocal microscopy. Moreover, this introduction of an exogenous Ag resulted in sensitization of the cell to lysis by a CTL clone specific for the 170-179 HLA-Cw3-derived peptide. Sensitivity of the Ag processing to brefeldin A but not to chloroquine is consistent with the delivery of AntpHD ***fusion*** peptides to the conventional class I-associated processing pathway. Immunization of DBA/2 (H-2(d)) mice with AntpHD pCw3 ***fusion*** peptide in the presence of SDS primed H-2K(d)-restricted HLA-Cw3- specific CTL. Similar results were obtained with AntpHD ***fusion*** peptides expressing the 147-156 influenza nucleoprotein peptide. The strategy outlined in this paper provides a new approach for introducing molecules into the MHC class I Ag-presenting pathway. This approach has clear relevance to the design of synthetic peptide-based vaccines.

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L2 103 S L1 AND (FUSI? OR CHIMER? OR CONJUGAT? OR HETEROLOG?)
L3 0 S L2 AND (NON DENATUR?)
L4 0 S L2 AND DISULFIDE BOND
L5 0 S L2 AND NOI
L6 6 S L2 AND ANTIGEN
L7 5 DUP REM L6 (1 DUPLICATE REMOVED)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L8 50 DUP REM L2 (53 DUPLICATES REMOVED)

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=> s l8 not l7
L9 46 L8 NOT L7

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L9 ANSWER 1 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2002:119614 BIOSIS
DN PREV200200119614
TI Antennapedia/HS1 ***chimeric*** phosphotyrosyl peptide: Conformational properties, binding capability to c-Fgr SH2 domain and cell permeability.
AU Ruzza, Paolo (1); Donella-Deana, Arianna; Calderan, Andrea; Brunati, Annamaria; Massimino, Maria Lina; Elardo, Stefano; Mattiazzo, Alessio; Pinna, Lorenzo A.; Borin, Gianfranco
CS (1) Biopolymers Research Center, CNR, Via Marzolo 1, Padova, 35131: paolo.ruzza@unipd.it Italy
SO Biopolymers, (2001) Vol. 60, No. 4, pp. 290-306. print.
ISSN: 0006-3525.
DT Article
LA English
AB With the aim of interfering with the signaling pathways mediated by the SH2 domains of Src-like tyrosine kinases, we synthesized a tyrosyl-phospho decapeptide, corresponding to the sequence 392-401 of HS1 protein, which inhibits the secondary phosphorylation of HS1 protein catalyzed by the Src-like kinases c-Fgr or Lyn. This phospho-peptide was modified to enter cells by coupling to the third helix of ***Antennapedia*** ***homeodomain*** , which is able to translocate across cell membranes. Here we present CD and fluorescence studies on the conformational behavior in membrane-mimicking environments and on lipid interactions of ***Antennapedia*** fragment and its ***chimeric*** phosphorylated and unphosphorylated derivatives. These studies evidenced that electrostatic rather than amphiphilic interactions determine the peptide adsorption on lipids. Experiments performed with recombinant protein containing the SH2 domain of c-Fgr fused with GST and with isolated erythrocyte membranes demonstrated that the presence of the N-terminal ***Antennapedia*** fragment only slightly affects the binding of the phospho-HS1 peptide to the SH2 domain. In fact, it has been shown that in isolated erythrocyte membranes, both phospho-HS1 peptide and its ***chimeric*** derivative greatly affect either the SH2-mediated recruitment of the c-Fgr to the transmembrane protein band 3 and the

following phosphorylation of the protein catalyzed by the Src-like kinase c-Fgr. The ability of the ***chimeric*** phospho-peptide to enter cells has been demonstrated by confocal microscopy analysis.

L9 ANSWER 2 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:289574 BIOSIS
DN PREV200100289574
TI Interaction and structure induction of cell-penetrating peptides in the presence of phospholipid vesicles.
AU Magzoub, Mazin; Kilk, Kalle; Eriksson, L. E. Goran; Langel, Ulo; Graslund, Astrid (1)
CS (1) Department of Biochemistry and Biophysics, Arrhenius Laboratories, Stockholm University, S-106 91, Stockholm: astrid@dbb.su.se Sweden
SO Biochimica et Biophysica Acta, (2 May, 2001) Vol. 1512, No. 1, pp. 77-89. print.
ISSN: 0006-3002.
DT Article
LA English
SL English
AB Certain short peptides, which are able to translocate across cell membranes with a low lytic activity, can be useful as carriers (vectors) for hydrophilic molecules. We have studied three such cell penetrating peptides: pAntp ('penetratin'), plsl and transportan. pAntp and plsl originate from the third helix of ***homeodomain*** proteins ( ***Antennapedia*** and lsl-1, respectively). Transportan is a synthetic ***chimera*** (galanin and mastoparan). The peptides in the presence of various phospholipid vesicles (neutral and charged) and SDS micelles have been characterized by spectroscopic methods (fluorescence, EPR and CD). The dynamics of pAntp were monitored using an N-terminal spin label. In aqueous solution, the CD spectra of the three peptides show secondary structures dominated by random coil. With phospholipid vesicles, neutral as well as negatively charged, transportan gives up to 60% alpha-helix. pAntp and plsl bind significantly only to negatively charged vesicles with an induction of around 60% beta-sheet-like secondary structure. With all three peptides, SDS micelles stabilize a high degree of alpha-helical structure. We conclude that the exact nature of any secondary structure induced by the membrane model systems is not directly correlated with the common transport property of these translocating peptides.

L9 ANSWER 3 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:81353 BIOSIS
DN PREV200100081353
TI Highly specific, membrane-permeant peptide blockers of cGMP-dependent protein kinase Ialpha inhibit NO-induced cerebral dilation.
AU Dostmann, Wolfgang R. G. (1); Taylor, Mark S.; Nickl, Christian K.; Brayden, Joseph E.; Frank, Ronald; Tegge, Werner J.
CS (1) Department of Pharmacology, Department of Molecular Physiology and Biophysics, College of Medicine, University of Vermont, Burlington, VT, 05405-0068: dostmann@salus.med.uvm.edu USA
SO Proceedings of the National Academy of Sciences of the United States of America, (December 19, 2000) Vol. 97, No. 26, pp. 14772-14777. print.
ISSN: 0027-8424.
DT Article
LA English
SL English
AB Arrays of octameric peptide libraries on cellulose paper were screened by using 32P-autophosphorylated cGMP-dependent protein kinase Ialpha (cGPK) to identify peptide sequences with high binding affinity for cGPK. Iterative deconvolution of every amino acid position in the peptides identified the sequence LRK5H (W45) as having the highest binding affinity. Binding of W45 to cGPK resulted in selective inhibition of the kinase with Ki values of 0.8 muM and 560 muM for cGPK and cAMP-dependent protein kinase (cAPK), respectively. ***Fusion*** of W45 to membrane translocation signals from HIV-1 tat protein (YGRKKRRQRRRPP-LRK5H, DT-2) or Drosophila Antennapedia homeo-domain (RQIKIWFQNRRMKWKK-LRK5H, DT-3) proved to be an efficient method for intracellular delivery of these highly charged peptides. Rapid translocation of the peptides into intact cerebral arteries was demonstrated by using fluorescein-labeled DT-2 and DT-3. The inhibitory potency of the ***fusion*** peptides was even greater than that for W45, with Ki values of 12.5 nM and 25 nM for DT-2 and DT-3, respectively. Both peptides were still poor inhibitors of cAPK. Selective inhibition of cGPK by DT-2 or DT-3 in the presence of cAPK was demonstrated in vitro. In pressurized cerebral arteries, DT-2 and DT-3 substantially decreased NO-induced dilation. This study provides functional characterization of a class of selective cGPK inhibitor peptides in vascular smooth muscle and reveals a central role for cGPK in the modulation of vascular contractility.

L9 ANSWER 4 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:491597 BIOSIS
DN PREV200000491718
TI The Antennapedia peptide penetratin translocates across lipid bilayers: The first direct observation.
AU Thoren, Per E. G.; Persson, Daniel; Karlsson, Mattias; Norden, Bengt (1)
CS (1) Department of Physical Chemistry, Chalmers University of Technology, SE-412 96, Gothenburg Sweden
SO FEBS Letters, (6 October, 2000) Vol. 482, No. 3, pp. 265-268. print.
ISSN: 0014-5793.
DT Article
LA English
SL English
AB The potential use of polypeptides and oligonucleotides for therapeutical purposes has been questioned because of their inherently poor cellular uptake. However, the 16-mer oligopeptide penetratin, derived from the ***homeodomain*** of ***Antennapedia*** , has been reported to enter cells readily via a non-endocytotic and receptor- and transporter-independent pathway, even when ***conjugated*** to large hydrophilic molecules. We here present the first study where penetratin is shown to traverse a pure lipid bilayer. The results support the idea that the uptake mechanism involves only the interaction of the peptide with the membrane lipids. Furthermore, we conclude that the translocation does not involve pore formation.

L9 ANSWER 5 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:104395 BIOSIS
DN PREV200000104395
TI PSM, a mediator of PDGF-BB-, IGF-I-, and insulin-stimulated mitogenesis.
AU Riedel, Heimo (1); Yousaf, Nasim; Zhao, Yuyuan; Dai, Heping; Deng, Youping; Wang, Jian
CS (1) Department of Biological Sciences, 2171 BSB, Wayne State University, Detroit, MI, 48202-3917 USA
SO Oncogene, (Jan. 6, 2000) Vol. 19, No. 1, pp. 39-50.
ISSN: 0950-9232.
DT Article
LA English
SL English
AB PSM/SH2-B has been described as a cellular partner of the FcepsilonRI receptor, insulin receptor (IR), insulin-like growth factor-I (IGF-I) receptor (IGF-IR), and nerve growth factor receptor (TrkA). A function has been proposed in neuronal differentiation and development but its role in other signaling pathways is still unclear. To further elucidate the physiologic role of PSM we have identified additional mitogenic receptor tyrosine kinases as putative PSM partners including platelet-derived growth factor (PDGF) receptor (PDGFR) beta, hepatocyte growth factor receptor (Met), and fibroblast growth factor receptor. We have mapped Y740 as a site of PDGFR beta that is involved in the association with PSM. We have further investigated the putative role of PSM in mitogenesis with three independent experimental strategies and found that all consistently suggested a role as a positive, stimulatory signaling adapter in normal NIH3T3 and baby hamster kidney fibroblasts. (1) PSM expression from cDNA using an ecdysone-regulated transient expression system stimulated PDGF-BB-, IGF-I-, and insulin- but not EGF-induced DNA synthesis in an ecdysone dose-responsive fashion; (2) Microinjection of the (dominant negative) PSM SH2 domain interfered with PDGF-BB- and insulin-induced DNA synthesis; and (3) A peptide mimetic of the PSM Pro-rich putative SH3 domain-binding region interfered with PDGF-BB-, IGF-I-, and insulin- but not with EGF-induced DNA synthesis in NIH3T3 fibroblasts. This experiment was based on cell-permeable ***fusion*** peptides with the Drosophila ***antennapedia*** ***homeodomain*** which effectively traverse the plasma membrane of cultured cells. These experimental strategies independently suggest that PSM functions as a positive, stimulatory, mitogenic signaling mediator in PDGF-BB, IGF-I, and insulin but not in EGF action. This function appears to involve the PSM SH2 domain as well as the Pro-rich putative SH3 domain binding region. Our findings support the model that PSM participates as an adapter in various mitogenic signaling mechanisms by linking an activated (receptor) phospho-tyrosine to the SH3 domain of an unknown cellular partner.

L9 ANSWER 6 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:431417 BIOSIS
DN PREV199900431417
TI Grb10, a positive, stimulatory signaling adapter in platelet-derived growth factor BB-, insulin-like growth factor I-, and insulin-mediated mitogenesis.
AU Wang, Jian; Dai, Heping; Yousaf, Nasim; Moussaif, Mustapha; Deng, Youping; Boufelliga, Amale; Swamy, O. Rama; Leone, Michelle E.; Riedel, Heimo (1)
CS (1) Department of Biological Sciences, Wayne State University, 2171 BSB, Detroit, MI, 48202-3917 USA
SO Molecular and Cellular Biology, (Sept., 1999) Vol. 19, No. 9, pp. 6217-6228.
ISSN: 0270-7306.
DT Article
LA English
SL English
AB Grb10 has been described as a cellular partner of several receptor tyrosine kinases, including the insulin receptor (IR) and the insulin-like growth factor I (IGF-I) receptor (IGF-IR). Its cellular role is still unclear and a positive as well as an inhibitory role in mitogenesis depending on the cell context has been implicated. We have tested other mitogenic receptor tyrosine kinases as putative Grb10 partners and have identified the activated forms of platelet-derived growth factor (PDGF) receptor beta (PDGFRbeta), hepatocyte growth factor receptor (Met), and fibroblast growth factor receptor as candidates. We have mapped Y771 as a PDFGRbeta site that is involved in the association with Grb10 via its SH2 domain. We have further investigated the putative role of Grb10 in mitogenesis with four independent experimental strategies and found that all consistently suggested a role as a positive, stimulatory signaling adaptor in normal fibroblasts. (i) Complete Grb10 expression from cDNA with anecdysone-regulated transient expression system stimulated PDGF-BB-,

IGF-I, and insulin- but not epidermal growth factor (EGF)-induced DNA synthesis in an ecdysone dose-responsive fashion. (ii) Microinjection of the (dominant-negative) Grb10 SH2 domain interfered with PDGF-BB- and insulin-induced DNA synthesis. (iii) Alternative experiments were based on cell-permeable ***fusion*** peptides with the Drosophila ***antennapedia*** ***homeodomain*** which effectively traverse the plasma membrane of cultured cells. A cell-permeable Grb10 SH2 domain similarly interfered with PDGF-BB-, IGF-I-, and insulin-induced DNA synthesis. In contrast, a cell-permeable Grb10 Pro-rich putative SH3 domain binding region interfered with IGF-I- and insulin- but not with PDGF-BB- or EGF-induced DNA synthesis. (iv) Transient overexpression of complete Grb10 increased whereas cell-permeable Grb10 SH2 domain ***fusion*** peptides substantially decreased the cell proliferation rate (as measured by cell numbers) in normal fibroblasts. These experimental strategies independently suggest that Grb10 functions as a positive, stimulatory, mitogenic signaling adapter in PDGF-BB, IGF-I, and insulin action. This function appears to involve the Grb10 SH2 domain, a novel sequence termed BPS, and the Pro-rich putative SH3 domain binding region in IGF-I- and insulin-mediated mitogenesis. In contrast, PDGF-BB-mediated mitogenesis appears to depend on the SH2 but not on the Pro-rich region and may involve other, unidentified Grb10 domains. Distinct protein domains may help to define specific Grb10 functions in different signaling pathways.

L9 ANSWER 7 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:79039 BIOSIS
DN PREV199900079039
TI A Sos-derived peptidimer blocks the Ras signaling pathway by binding both Grb2 SH3 domains and displays antiproliferative activity.
AU Cussac, Didier; Vidal, Michel; Leprince, Corinne; Liu, Wang-Qing; Cornille, Fabrice; Tiraboschi, Gilles; Roques, Bernard P. (1); Garbay, Christiane
CS (1) Dep. Pharmacochimie Moleculaire Structurale, INSERM U266-CNRS UMR 8600, UFR Sciences Pharmaceutiques Biologiques, 4 Avenue Observatoire, 75270 Paris, Cedex 6 France
SO FASEB Journal, (Jan., 1999) Vol. 13, No. 1, pp. 31-39.
ISSN: 0892-6638.
DT Article
LA English
AB With the aim of interrupting the growth factor-stimulated Ras signaling pathway at the level of the Grb2-Sos interaction, a peptidimer, made of two identical proline-rich sequences from Sos linked by a lysine spacer, was designed using structural data from Grb2 and a proline-rich peptide complexed with its SH3 domains. The peptidimer affinity for Grb2 is 40 nM whereas that of the monomer is 16 muM, supporting the dual recognition of both Grb2 SH3 domains by the dimer. At 50 nM, the peptidimer blocks selectively Grb2-Sos complexation in ER 22 (CCL 39 fibroblasts overexpressing epidermal growth factor receptor) cellular extracts. The peptidimer specifically recognizes Grb2 and does not interact with P13K or Nck, two SH3 domain-containing adaptors. The peptidimer was modified to enter cells by coupling to a fragment of ***Antennapedia*** ***homeodomain*** . At 10 muM, the ***conjugate*** inhibits the Grb2Sos interaction (100%) and MAP kinase (ERK1 and ERK2) phosphorylation (60 %) without modifying cellular growth of ER 22 cells. At the same concentration, the ***conjugate*** also inhibits both MAP kinase activation induced by nerve growth factor or epidermal growth factor in PC12 cells, and differentiation triggered by nerve growth factor. Finally, when tested for its antiproliferative activity, the ***conjugate*** was an efficient inhibitor of the colony formation of transformed NIH3T3/HER2 cells grown in soft agar, with an IC50 of around 1 muM. Thus, the designed peptidimers appear to be interesting leads to investigate signaling and intracellular processes and for designing selective inhibitors of tumorigenic Ras-dependent processes.

L9 ANSWER 8 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:70923 BIOSIS
DN PREV199800070923
TI Synthesis and membrane permeability of PNA-peptide ***conjugates*** .
AU Simmons, Carla G.; Pitts, Anne E.; Mayfield, Lynn D.; Shay, Jerry W.; Corey, David R. (1)
CS (1) Dep. Pharmacol., Howard Hughes Med. Inst., 5323 Harry Hines Blvd., Dallas, TX 75235 USA
SO Bioorganic & Medicinal Chemistry Letters, (Dec. 2, 1997) Vol. 7, No. 23, pp. 3001-3006.
ISSN: 0960-894X.
DT Article
LA English
AB ***Chimeric*** molecules consisting of peptide nucleic acid oligomers (PNAs) and peptides derived from the third helix of the ***homeodomain*** of ***Antennapedia*** are taken up by mammalian cells in culture. Uptake is independent of orientation and occurs with high efficiency, suggesting that peptide ***conjugates*** are a promising strategy for intracellular PNA delivery.

L9 ANSWER 9 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1997:312739 BIOSIS
DN PREV199799820542
TI A truncated HIV-1 Tat protein basic domain rapidly translocates through the plasma membrane and accumulates in the cell nucleus.
AU Vives, Eric; Brodin, Priscille; Lebleu, Bernard (1)
CS (1) Institut de Genetique Moleculaire de Montpellier, CNRS-UMR 5535, BP5051, 1919 route de Mende, 34033 Montpellier cedex 1 France
SO Journal of Biological Chemistry, (1997) Vol. 272, No. 25, pp. 16010-16017.
ISSN: 0021-9258.
DT Article
LA English
AB Tat is an 86-amino acid protein involved in the replication of human immunodeficiency virus type 1 (HIV-1). Several studies have shown that exogenous Tat protein was able to translocate through the plasma membrane and to reach the nucleus to transactivate the viral genome. A region of the Tat protein centered on a cluster of basic amino acids has been assigned to this translocation activity. Recent data have demonstrated that chemical coupling of a Tat-derived peptide (extending from residues 37 to 72) to several proteins allowed their functional internalization into several cell lines or tissues. A part of this same domain can be folded in an a-helix structure with amphipathic characteristics. Such helical structures have been considered as key determinants for the uptake of several enveloped viruses by ***fusion*** or endocytosis. In the present study, we have delineated the main determinants required for Tat translocation within this sequence by synthesizing several peptides covering the Tat domain from residues 37 to 60. Unexpectedly, the domain extending from amino acid 37 to 47, which corresponds to the alpha-helix structure, is not required for cellular uptake and for nuclear translocation. Peptide internalization was assessed by direct labeling with fluorescein or by indirect immunofluorescence using a monoclonal antibody directed against the Tat basic cluster. Both approaches established that all peptides containing the basic domain are taken up by cells within less than 5 min at concentrations as low as 100 nM. In contrast, a peptide with a full alpha-helix but with a truncated basic amino acid cluster is not taken up by cells. The internalization process does not involve an endocytic pathway, as no inhibition of the uptake was observed at 4 degree C. Similar observations have been reported for a basic amino acid-rich peptide derived from the ***Antennapedia*** ***homeodomain*** (1). Short peptides allowing efficient translocation through the plasma membrane could be useful vectors for the intracellular delivery of various non-permeant drugs including antisense oligonucleotides and peptides of pharmacological interest.

L9 ANSWER 10 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1996:381262 BIOSIS
DN PREV199699103618
TI Introduction of exogenous antigens into the MHC class I processing and presentation pathway by Drosophila ***antennapedia*** ***homeodomain*** primes cytotoxic T cells in vivo.
AU Schutze-Redelmeier, Marie-Paule; Gournier, Helene (1); Garcia-Pons, Francois; Moussa, Marlene; Joliot, Alain J.; Volovitch, Michel; Prochiantz, Alain; Lemonnier, Francois A.
CS (1) Unite d'Immunite Cellulaire Antivirale, Dep. SIDA-Retrovirus, Inst. Pasteur, 28 rue du Dr. Roux, 75724 Paris Cedex 15 France
SO Journal of Immunology, (1996) Vol. 157, No. 2, pp. 650-655.
ISSN: 0022-1767.
DT Article
LA English
AB The ***homeodomain*** of the ***Antennapedia*** molecule (AntpHD) spontaneously crosses cellular membranes and can be used to deliver up to So additional amino acids to the cytoplasm. We exploited this approach to deliver antigenic peptides to the MHC class I processing and presentation pathway. AntpHD-based ***fusion*** peptides expressing the 170-179 HLA-Cw3 CTL epitope (pCw3) were produced in bacteria. Incubation of these ***fusion*** peptides with H-2-d target cells resulted in efficient delivery to the cytosol as indicated by protease resistance and confocal microscopy. Moreover, this introduction of an exogenous Ag resulted in sensitization of the cell to lysis by a CTL clone specific for the 170-179 HLA-Cw3-derived peptide. Sensitivity of the Ag processing to brefeldin A but not to chloroquine is consistent with the delivery of AntpHD ***fusion*** peptides to the conventional class I-associated processing pathway. Immunization of DBA/2 (H-2-d) mice with AntpHD pCw3 ***fusion*** peptide in the presence of SDS primed H-2K-d-restricted HLA-Cw3-specific CTL. Similar results were obtained with AntpHD ***fusion*** peptides expressing the 147-156 influenza nucleoprotein peptide. The strategy outlined in this paper provides a new approach for introducing molecules into the MHC class I Ag-presenting pathway. This approach has clear relevance to the design of synthetic peptide-based vaccines.

L9 ANSWER 11 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1996:60056 BIOSIS
DN PREV199698632191
TI Sequence and expression of grasshopper antennapedia: Comparison to Drosophila.
AU Hayward, David C. (1); Patel, Nipam H.; Rehm, E. Jay; Goodman, Corey S.; Ball, Eldon E.
CS (1) Molecular Evolution and Systematics Group, Res. Sch. Biol. Sci., Aust. Natl. Univ., P.O. Box 475, Canberra, ACT 2601 Australia
SO Developmental Biology, (1995) Vol. 172, No. 2, pp. 452-465.
ISSN: 0012-1606.
DT Article
LA English
AB We have cloned and characterized the ***Antennapedia*** (Antp) gene from the grasshopper Schistocerca americana. The ***Antennapedia***

protein contains seven blocks of sequence, including the ***homeodomain*** , that are conserved in the homologous proteins of other insects, interspersed with (usually repetitive) sequences unique to each species. There is no similarity between 1.8 kb of 3' untranslated sequence in grasshopper and Drosophila. We examined ***Antennapedia*** protein expression in grasshopper using an antibody raised against a grasshopper ***fusion*** protein and reexamined its expression in Drosophila using several different antibodies. Early patterns of expression in the two insects are quite different, reflecting differing modes of early development. However, by the germband stage, expression patterns are quite similar, with relatively uniform epithelial expression throughout the thoracic and abdominal segments which later retracts to the thorax. Expression is observed in muscle pioneers, the peripheral nervous system, and the central nervous system (CNS). In the CNS expression is initially limited to a few neurons, but eventually becomes widespread. Both insects show strong expression in certain homologous identified neurons and similar temporal modulation of expression.

L9 ANSWER 12 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:86283 BIOSIS
DN PREV199598100583
TI The C-terminus of the homeodomain is required for functional specificity of the Drosophila rough gene.
AU Heberlein, Ulrike; Penton, Andrea; Falsafi, Sima; Hackett, Davie; Rubin, Gerald M.
CS Gallo Cent. Dep. Neurol., Build. 1, Room 101, Univ. Calfiornia San Francisco, San Francisco Gen. Hosp., San Francisco, CA 94110 USA
SO Mechanisms of Development, (1994) Vol. 48, No. 1, pp. 35-49.
ISSN: 0925-4773.
DT Article
LA English
AB In contrast to most Drosophila homeobox genes, which are required during embryogenesis, the rough gene is involved in photoreceptor cell specification in the compound eye. Taking advantage of the viability of null rough alleles and the small size of the rough gene, we have combined in vivo and in vitro mutagenesis to define important functional domains in the rough protein. All missense mutations found to disrupt rough function mapped to highly conserved amino acids in the ***homeodomain*** (HD), suggesting that the nature of few, if any, single amino acids outside the HD is critical for rough activity. The analysis of ***chimeric*** proteins, in which the whole HD or parts of it were swapped between the rough and ***Antennapedia*** (Antp) proteins, revealed that the C-terminus of the rough HD is important for rough activity in vivo. This C-terminal region was also found to be required for the recognition of rough binding sites in vitro. Our data suggest that amino acids located in the C-terminus of the ***homeodomain*** may play important roles in selective binding site recognition.

L9 ANSWER 13 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:497626 BIOSIS
DN PREV199497510626
TI Rab3A and Rab3B carboxy-terminal peptides are both potent and specific inhibitors of prolactin release by rat cultured anterior pituitary cells.
AU Perez, Franck; Lledo, Pierre-Marie; Karagogeos, Domna; Vincent, Jean-Didier (1); Prochiantz, Alain; Ayala, Jesus
CS (1) CNRS UPR 2212, Inst. Alfred Fessard, 1 Ave. Terrasse, 91198 Gif sur Yvette Cedex France
SO Molecular Endocrinology, (1994) Vol. 8, No. 9, pp. 1278-1287.
ISSN: 0888-8809.
DT Article
LA English
AB ***Chimeric*** polypeptides composed of the ***homeodomain*** of ***Antennapedia*** and of the C-terminus of several low molecular weight GTP-binding proteins of the rab family have been found to translocate through the membrane of cells in culture and to accumulate in the cytoplasm and nucleus. We have used these ***chimeric*** peptides to study, in intact endocrine cells, a putative role for the C-terminal domain of rab proteins in the exocytotic process. We show that the internalization of 33- and 32-amino acid polypeptides corresponding to the C-terminal domains of rab3A and rab3B blocks calcium-triggered PRL release from adult rat anterior pituitary cells maintained in primary culture. This effect is specific to rab3 since it is not observed after internalization of either rab1 or rab2 C-terminal peptides. In addition, we demonstrate that this inhibition does not require the geranylgeranylation of the internalized C-termini. As rab3B normally shows a permissive effect on exocytosis in PRL-secreting cells, we suggest that the C-terminal domains of rab3A and rab3B contain structural elements that compete with endogeneous rab3 necessary for calcium-induced exocytosis.

L9 ANSWER 14 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:405154 BIOSIS
DN PREV199497418154
TI A differential response element for the homeotics at the Antennapedia P1 promoter of Drosophila.
AU Saffman, Emma E.; Krasnow, Mark A. (1)
CS (1) Dep. Biochem., Stanford Univ., Stanford, CA 94305 USA
SO Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 16, pp. 7420-7424.
ISSN: 0027-8424.
DT Article
LA English
AB Homeotic genes encode DNA-binding transcription factors that specify the identity of a segment or segments in particular body regions of Drosophila. The developmental specificity of these proteins results from their differential regulation of various target genes. This specificity could be achieved by use of different regulatory elements by the homeoproteins or by use of the same elements in different ways. The Ultrabithorax (UBX), abdominal-A (ABD-A), and ***Antennapedia*** (ANTP) homeoproteins differentially regulate the ***Antennapedia*** P1 promoter in a cell culture cotransfection assay: UBX and ABD-A repress, whereas ANTP activates P1. Either of two regions of P1 can confer this pattern of differential regulation. One of the regions lies downstream and contains homeoprotein-binding sites flanking a 37-bp region called BetBS. ANTP protein activates transcription through the binding sites, whereas UBX and ABD-A both activate transcription through BetBS and use the flanking binding sites to prevent this effect. Thus, homeoproteins can use the same regulatory element but in very different ways. ***Chimeric*** UBX-ANTP proteins and UBX deletion derivatives demonstrate that functional specificity in P1 regulation is dictated mainly by sequences outside the ***homeodomain*** , with important determinants in the N-terminal region of the proteins.

L9 ANSWER 15 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:478993 BIOSIS
DN PREV199396112593
TI Abdominal-B protein isoforms exhibit distinct cuticular transformations and regulatory activities when ectopically expressed in Drosophila embryos.
AU Kuziora, Michael A.
CS Dep. Biol. Sci., Univ. Pittsburgh, A234 Langley Hall, Pittsburgh, PA 15260 USA
SO Mechanisms of Development, (1993) Vol. 42, No. 3, pp. 125-137.
ISSN: 0925-4773.
DT Article
LA English
AB The Drosophila homeotic gene Abdominal-B includes two genetically distinct elements, a morphogenetic (m) activity and a regulatory (r) activity. The proteins responsible for these activities were ectopically expressed in fly embryos. The larval cuticular transformations which result are consistent with the genetically defined role of each protein during normal embryogenesis. Both ABD-B proteins activate ectopic expression of transcripts encoding the m protein, but the levels of ***Antennapedia*** , Ultrabithorax and abdominal-A transcripts are differentially repressed. A structural and functional comparison of the ABD-B proteins and a ***chimeric*** DFD/ABD-B protein reaffirms that target specificity is largely determined by the ***homeodomain*** region and suggests protein domains outside of the ***homeodomain*** influence the activation or repression of target gene expression.

L9 ANSWER 16 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:387956 BIOSIS
DN PREV199396063256
TI Functional specificity of the ***antennapedia*** ***homeodomain***
AU Furukubo-Tokunaga, Katsuo (1); Flister, Susanne; Gehring, Walter J.
CS (1) Dep. Neurobiology, Zoologiscches Inst., Univ. Basel, Rheinsprung 9, CH-4051 Basel Switzerland
SO Proceedings of the National Academy of Sciences of the United States of America, (1993) Vol. 90, No. 13, pp. 6360-6364.
ISSN: 0027-8424.
DT Article
LA English
AB The segmental identity in animal development is determined by a set of homeotic selector genes clustered in the invertebrate HOM or vertebrate Hox homeo box complexes. These genes encode proteins with very similar homeodomains and highly diverged N- and C-terminal sequences. The ***Antennapedia*** (Antp) ***homeodomain*** , for instance, differs at only five amino acid positions from that of Sex combs reduced (Scr) protein. Using a heat shock assay in which ***chimeric*** Antp-Scr proteins are expressed ectopically in Drosophila, we have shown that the functional specificity of the Antp protein is determined by the four specific amino acids located in the flexible N-terminal arm of the ***homeodomain*** . The three-dimensional structure of the Antp ***homeodomain*** -DNA complex shows that this N-terminal arm is located in the minor groove of the DNA, suggesting that the functional specificity is determined either by slight differences in DNA binding and/or by selective interactions with other transcription factor(s).

L9 ANSWER 17 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:387753 BIOSIS
DN PREV199396083053
TI Ectopic expression and function of the Antp and Scr homeotic genes: The N-terminus of the homeodomain is critical to functional specificity.
AU Zeng, Wenlin; Andrew, Deborah J.; Mathies, Laura; Horner, Michael A.; Scott, Matthew P. (1)
CS (1) Dep. Dev. Biol. and Genetics, Stanford Univ. Sch. Med., Stanford, CA 94305-5427 USA
SO Development (Cambridge), (1993) Vol. 118, No. 2, pp. 339-352.
ISSN: 0950-1991.
DT Article

LA English
AB The transcription factors encoded by homeotic genes determine cell fates during development. Each homeotic protein causes cells to follow a distinct pathway, presumably by differentially regulating downstream 'target' genes. The ***homeodomain*** , the DNA-binding part of homeotic proteins, is necessary for conferring the specificity of each homeotic protein's action. The two Drosophila homeotic proteins encoded by ***Antennapedia*** and Sex combs reduced determine cell fates in the epidermis and internal issues of the posterior head and thorax. Genes encoding ***chimeric*** Antp/Scr proteins were introduced into flies and their effects on morphology and target gene regulation observed. We find that the N terminus of the ***homeodomain*** is critical for determining the specific effects of these homeotic proteins in vivo, but other parts of the proteins have some influence as well. The N-terminal part of the ***homeodomain*** has been observed, in crystal structures and in NMR studies in solution, to contact the minor groove of the DNA. The different effects of ***Antennapedia*** and Sex combs reduced proteins in vivo may depend on differences in DNA binding, protein-protein interactions, or both.

L9 ANSWER 18 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:228853 BIOSIS
DN PREV199395120028
TI In vitro binding to the leucine tRNA gene identifies a novel yeast homeobox gene.
AU Kaufmann, Eckhard
CS Max-Planck-Inst. biophysikalische Chem., Abt. Mol. Entwicklungsbiol., Am Fassberg, W-3400 Goettingen 23 Germany
SO Chromosoma (Berlin), (1993) Vol. 102, No. 3, pp. 174-179.
ISSN: 0009-5915.
DT Article
LA English
AB In a search for gene products of Saccharomyces cerevisiae interacting with the internal promoter of yeast tRNA genes two genes encoding a ***homeodomain*** protein of the Drosophila ***Antennapedia*** type were isolated. One of them codes for Pho2, and the second codes for a previously unknown protein (Yox1). The corresponding gene, termed YOX1, maps to chromosome 16. The amino acid sequence of Yox1 shows a remarkable
similarity within the homeobox domain to many proteins from a wide variety of sources. ***Fusion*** proteins that contain sequences encoded by these genes demonstrate that the genes encode DNA-binding proteins that are capable of binding to the DNA of the leucine tRNA gene in vitro. However, deletion of YOX1 gene activity does not give rise to a scorable mutant phenotype. This result leaves open whether Yox1 binding to the leucine tRNA gene is necessary for the in vivo regulation of the gene and its suggests that the YOX1 gene codes for a nonessential product.

L9 ANSWER 19 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:117506 BIOSIS
DN PREV199395061606
TI POU-specific domain of Oct-2 factor confers "octamer" motif DNA binding specificity on ***heterologous*** ***Antennapedia*** ***homeodomain*** .
AU Brugnera, Enrico; Xu, Licen; Schaffner, Walter; Arnosti, David N.
CS Inst. Molecular Biol. II, Univ. Zurich, Winterthurerstrasse 190, CH-8057 Zurich Switzerland
SO FEBS (Federation of European Biochemical Societies) Letters, (1992) Vol. 314, No. 3, pp. 361-365.
ISSN: 0014-5793.
DT Article.
LA English
AB The bipartite ***DNA*** ***binding*** ***domain*** of the POU family of transcription factors contains a 'POU-specific' domain unique to this class of factors and a 'POU ***homeodomain*** ' homologous to other homeodomains. We compared DNA binding of the Oct-2 factor POU domain
and the ***Antennapedia*** (Antp) ***homeodomain*** with a ***chimeric*** Oct-2/Antp protein in which the distantly related Antp ***homeodomain*** was substituted for the Oct-2 POU ***homeodomain*** . The Oct-2/Antp ***chimeric*** protein bound both the octamer and the Antp sites efficiently, indicating that DNA binding specificity is contributed by both components of the POU domain.

L9 ANSWER 20 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:454672 BIOSIS
DN BA92:99452
TI AN UPSTREAM REGULATORY ELEMENT OF THE NCAM PROMOTER CONTAINS A BINDING
SITE FOR HOMEODOMAINS.
AU HIRSCH M-R; VALARCHE I; DEAGOSTINI-BAZIN H; PERNELLE C; JOLIOT A; GORIDIS
C
CS LUMINY CASE 906, F-13288 MARSEILLE CEDEX 9, FR.
SO FEBS (FED EUR BIOCHEM SOC) LETT, (1991) 287 (1-2), 197-202.
CODEN: FEBLAL. ISSN: 0014-5793.
FS BA; OLD
LA English
AB In the present study, we have analyzed an upstream regulatory element of the neural cell adhesion molecule (NCAM) promoter which is required for full promoter activity. It contains an ATTATTA motif that resembles the core recognition sequence of ***homeodomain*** (HD) proteins of the ***Antennapedia*** (Antp) and related types. Electrophoretic mobility shift (EMSA) and DNase I footprinting analyses revealed that the Drosophila HDs coded by the Antp and the zerknuellt (zen) genes bind this site in vitro. In contrast, the engrailed (en) protein did not produce a detectable footprint. The functional relevance of the ATTATTA motif was demonstrated by showing that a two-nucleotide exchange curtailed stimulation of an ***heterologous*** promotor. An oligonucleotide known to be recognized with high affinity by Antp-like HDs efficiently competed for endogenous factor binding. These results suggest that the NCAM gene may be a target for HD proteins.

L9 ANSWER 21 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:454663 BIOSIS
DN BA92:99443
TI A HOMEODOMAIN PROTEIN BINDS TO GAMMA GLOBIN GENE REGULATORY SEQUENCES.
AU LAVELLE D; DUCKSWORTH J; EVES E; GOMES G; KELLER M; HELLER P; DESIMONE J
CS DEP. MED., UNIV. ILLINOIS AT CHICAGO, VETERANS ADMINISTRATION WESTSIDE
MED. CENTER, CHICAGO, ILL. 60612.
SO PROC NATL ACAD SCI U S A, (1991) 88 (16), 7318-7322.
CODEN: PNASA6. ISSN: 0027-8424.
FS BA; OLD
LA English
AB Developmental regulation of .gamma.-globin gene expression probably occurs through developmental-stage-specific trans-acting factors able to promote the interaction of enhancer elements located in the far upstream locus control region with regulatory elements in the .gamma. gene promoters and 3' A.gamma. enhancer located in close proximity to the genes. We have detected a nuclear protein in K562 and baboon fetal bone marrow nuclear extracts capable of binding to A+T-rich sequences in the locus control region, .gamma. gene promoter, and 3' A.gamma. enhancer. SDS/polyacrylamide gel analysis of the purified K562 binding activity revealed a single protein of 87 kDa. A K562 cDNA clone was isolated encoding a .beta.-galactosidase ***fusion*** protein with a DNA binding specificity identical to that of the K562/fetal bone marrow nuclear protein. The cDNA clone encodes a ***homeodomain*** homologous to the Drosophila ***antennapedia*** protein.

L9 ANSWER 22 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:49773 BIOSIS
DN BA91:28054
TI THE DNA BINDING SPECIFICITY OF THE DROSOPHILA FUSHI TARAZU PROTEIN A
POSSIBLE ROLE FOR DNA BENDING IN HOMEODOMAIN RECOGNITION.
AU NELSON H B; LAUGHON A
CS LAB. GENETICS, UNIV. WIS.-MADISON, MADISON, WIS. 53706.
SO NEW BIOL, (1990) 2 (2), 171-178.
CODEN: NEBIE2. ISSN: 1043-4674.
FS BA; OLD
LA English
AB Segmentation in Drosophila melanogaster is controlled by a network of interacting genes, many of which encode a ***homeodomain*** that confers sequence-specific binding to DNA. One of these, fushi tarazu (ftz), is a transcription factor that regulates a number of segmentation and homeotic genes, including ***Antennapedia*** (Antp). To determine the DNA binding specificity of the ftz ***homeodomain*** , we performed DNase I footprint analysis on ftz protein binding sites located near the two Antp promoters using a .beta.-galactoside/ftz ***fusion*** protein synthesized in E. coli. A consensus sequence for the ***fusion*** protein's preferred binding site was derived from 19 sites. The consensus sequence contains an ATTA motif, as do the reported consensus sequences for the engrailed (en), even-skipped (eve), and bicoid (bcd) Drosophila ***homeodomain*** proteins. We propose DNA bending as an explanation for the presence of a shared motif between proteins with divergent recognition helices: according to this model, bases in ATTA would not directly contact amino acid side chains of the recognition helix but rather would be necessary for bending of the DNA around the ***homeodomain*** , perhaps facilitating important protein-DNA contacts.

L9 ANSWER 23 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1990:198576 BIOSIS
DN BA89:105247
TI FUNCTIONAL DISSECTION OF ULTRABITHORAX PROTEINS IN DROSOPHILA-
MELANOGASTER.
AU MANN R S; HOGNESS D S
CS DEP. BIOCHEM., BECKMAN CENT., STANFORD UNIV. SCH. MED., STANFORD, CALIF.
94305.
SO CELL, (1990) 60 (4), 597-610.
CODEN: CELLB5. ISSN: 0092-8674.
FS BA; OLD
LA English
AB Expression of Ultrabithorax (UBX) proteins via a heat-inducible promoter generated homeotic transformations of segmental identities in the embryonic cuticle and peripheral nervous system (PNS) of Drosophila and

transformed antennae into legs in the adult. The embryonic transformations were used to determine the identity functions of members of the UBX family and UBX mutant forms. Whereas UBX forms I and IV each induced the cuticle transformations, only form I induced the PNS transformations. Analysis of the transformations generated by UBX deletions and by a ***chimeric*** Ultrabithorax- ***Antennapedia*** protein demonstrated that the majority of the UBX identity information is contained within the C-terminal, ***homeodomain*** -containing portion of the protein. Implications of these results for how homeotic proteins select particular metameric identities are discussed.

L9 ANSWER 24 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1990:47730 BIOSIS
DN BA89:25094
TI A HOMEODOMAIN SUBSTITUTION CHANGES THE REGULATORY SPECIFICITY OF THE
DEFORMED PROTEIN IN DROSOPHILA EMBRYOS.
AU KUZIORA M A; MCGINNIS W
CS DEP. MOL. BIOPHYS. BIOCHEM., YALE UNIV., NEW HAVEN, CONN. 06511, USA.
SO CELL, (1989) 59 (3), 563-572.
CODEN: CELLB5. ISSN: 0092-8674.
FS BA; OLD
LA English
AB ***Homeodomain*** proteins are believed to direct developmental pathways during Drosophila embryogenesis by the specific regulation of other genes. An unresolved issue is whether it is the ***homeodomain*** or the other regions of such proteins that confer target specificity. To test the role of the homoeodomain in determining target specificity, we replaced the homeobox of Deformed with the homeobox of Ultrabithorax. The resulting ***chimeric*** protein cannot activate transcription from the Deformed gene, as does the normal Deformed protein. Instead, the ***chimeric*** protein activates ectopic transcription of ***Antennapedia*** , a gene normally regulated by Ultrabithorax. Our results indicate that in the context of the developing embryo, even closely related ***homeodomain*** sequences have different target specificities.

L9 ANSWER 25 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1989:404098 BIOSIS
DN BA88:73523
TI DNA SPECIFICITY OF THE BICOID ACTIVATOR PROTEIN IS DETERMINED BY
HOMEODOMAIN RECOGNITION HELIX RESIDUE 9.
AU HANES S D; BRENT R
CS DEP. MOL. BIOL., MASSACHUSETTS GENERAL HOSP., BOSTON, MASS. 02114.
SO CELL, (1989) 57 (7), 1275-1283.
CODEN: CELLB5. ISSN: 0092-8674.
FS BA; OLD
LA English
AB Formation of anterior structures in the Drosophila embryo requires the product of the gene bicoid. The bicoid protein contains a ***homeodomain*** and may exert its effects in early development by regulating transcription of the gap gene, hunchback (hb). Consistent with this view, we have demonstrated that DNA-bound Bicoid ***fusion*** proteins stimulate gene expression. We used the gene activation phenotype in yeast to study DNA recognition by the Bicoid ***homeodomain*** . We found that a single amino acid replacement at position 9 of the recognition helix was sufficient to switch the DNA specificity of the Bicoid protein. The altered specificity Bicoid mutants recognized DNA sites bound by Ultrabithorax, fushi tarazu, and other related ***homeodomain*** proteins. Our results suggest that DNA specificity in Bicoid and ***Antennapedia*** class proteins is determined by recognition helix residue 9.

L9 ANSWER 26 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1989:380819 BIOSIS
DN BA88:61409
TI TRANSCRIPTIONAL ACTIVATION BY THE ANTENNAPEDIA AND FUSHI TARAZU PROTEINS
IN CULTURED DROSOPHILA CELLS.
AU WINSLOW G M; HAYASHI S; KRASNOW M; HOGNESS D S; SCOTT M P
CS DEP. MOLECULAR CELLULAR AND DEV. BIOL., UNIV. COLO., BOULDER, COLO.
80309-0347.
SO CELL, (1989) 57 (6), 1017-1030.
CODEN: CELLB5. ISSN: 0092-8674.
FS BA; OLD
LA English
AB Drosophila ***homeodomain*** proteins bind to specific DNA sequences in vitro and are hypothesized to regulate the transcription of other genes during development. Using a cotransfection assay, we have shown that ***homeodomain*** proteins encoded by the homeotic gene ***Antennapedia*** (Antp)and the segmentation gene fushi tarazu, as well as a hybrid ***homeodomain*** protein, are activators of transcription for specific promoters in cutlured Drosophila cells. Sequences downstream of the Antp P1 and Ultrabithorax transcription start sites mediate the observed activation. A TAA-rich DNA sequence to which the Antp protein binds in vitro is sufficient to confer regulation on a ***heterologous*** promoter. The results demonstrate that ***homeodomain*** proteins are transcriptional regulators in vivo and that in cultured cells, different ***homeodomain*** -containing proteins can act upon a common sequence to modulate gene transcription.

L9 ANSWER 27 OF 46 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1989:310313 BIOSIS
DN BA88:24043
TI XLHBOX 8 A NOVEL XENOPUS HOMEO PROTEIN RESTRICTED TO A NARROW BAND OF
ENDODERM.
AU WRIGHT C V E; SCHNEGELSBERG P; DE ROBERTIS E M
CS DEP. BIOLOGICAL CHEM., UNIV. CALIF., LOS ANGELES, CALIF. 90024-1737.
SO DEVELOPMENT (CAMB), (1989) 105 (4), 787-794.
CODEN: DEVPED. ISSN: 0950-1991.
FS BA; OLD
LA English
AB We report the isolation of a new homeobox gene from Xenopus laevis genomic
DNA. The ***homeodomain*** sequence is highly diverged from the prototype ***Antennapedia*** sequence, and contains a unique histidine residue in the helix that binds to DNA. The ***homeodomain*** is followed by a 65 amino acid carboxy-terminal domain, the longest found to date in any vertebrate homeobox gene. We have raised specific antibodies against an XIHbox 8-.beta.-gal ***fusion*** protein to determine the spatial and temporal expression of this gene. The nuclear protein first appears in a narrow band of the endoderm at stage 33 and develops into expression within the epithelial cells of the pancreatic anlagen and duodenum. Expression within the pancreatic epithelium persists into the adult frog. This unprecedented restriction to an anteroposterior band of the endoderm suggests that vertebrate homeobox genes might be involved in specifying positional information not only in the neuroectoderm and mesoderm, but also in the endoderm. Our data suggest tht XIHbox 8 may therefore represent the first member of a new class of position-dependent transcription factors affecting endodermal differentiation.

L9 ANSWER 28 OF 46 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2002299821 EMBASE
TI A quantitative validation of fluorophore-labelled cell-permeable peptide ***conjugates*** : Fluorophore and cargo dependence of import.
AU Fischer R.; Waizenegger T.; Kohler K.; Brock R.
CS R. Brock, Group of Genomics and Proteomics, Center for Bioinformatics Tubingen, Institute for Cell Biology, Auf der Morgenstelle 15, 72076 Tubingen, Germany. roland.brock@uni-tuebingen.de
SO Biochimica et Biophysica Acta - Biomembranes, (31 Aug 2002) 1564/2 (365-374).
Refs: 34
ISSN: 0005-2736 CODEN: BBBMBS
PUI S 0005-2736(02)00471-6
CY Netherlands
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English
AB Cell-permeable peptides were evaluated for a quantitatively controlled import of small molecules. The dependence of the import efficiency on the fluorophore, on the position of the fluorophore as well as on the nature of the cargo were addressed. Cellular uptake was quantitated by flow cytometry and fluorescence correlation microscopy (FCM). Fluorophores with different spectral characteristics, covering the whole visible spectral range, were selected in order to enable the simultaneous detection of several cell-permeable peptide constructs. The transcytosis sequences were based either on the sequence of the ***Antennapedia*** ***homeodomain*** protein (AntpHD)-derived penetratin peptide or the Kaposi fibroblast growth factor (FGF)-derived membrane translocating sequence (MTS)-peptide. In general, the AntpHD-derived peptides had a three- to fourfold higher import efficiency than the MTS-derived peptides. In spite of the very different physicochemical characteristics of the fluorophores, the import efficiencies for analogues labelled at different positions within the sequence of the import peptides showed a strong positive correlation. However, even for peptide cargos of very similar size, pronounced differences in import efficiency were observed. The use of cell-permeable peptide/cargo constructs for intracellular analyses of structure-function relationships therefore requires the determination of the intracellular concentrations for each construct individually.


L9 ANSWER 29 OF 46 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2002206070 EMBASE
TI Exploring the mechanisms of vascular smooth muscle tone with highly specific, membrane-permeable inhibitors of cyclic GMP-dependent protein kinase I.alpha..
AU Dostmann W.R.G.; Tegge W.; Frank R.; Nickl C.K.; Taylor M.S.; Brayden J.E.
CS W.R.G. Dostmann, Department of Pharmacology, University of Vermont, College of Medicine, 89 Beaumont Avenue, Burlington, VT 05405, United States. wolfgang.dostmann@uvm.edu
SO Pharmacology and Therapeutics, (2002) 93/2-3 (203-215).
Refs: 57
ISSN: 0163-7258 CODEN: PHTHDT
PUI S 0163-7258(02)00189-4
CY United States

DT Journal; Article
FS 002 Physiology
029 Clinical Biochemistry
LA English
SL English
AB The structural similarity of cyclic GMP-dependent protein kinase (cGPK) and cyclic AMP-dependent protein kinase (cAPK) has made it difficult to study cGPK pathways independent of those mediated by cAPK, primarily due to the lack of potent and selective cGPK inhibitors. We recently reported a novel peptide library screen specifically designed to select for tight-binding peptides that identified selective inhibitors of cGPK [Proc Natl Acad Sci USA, 97 (2000) 14772]. Iterative deconvolution of octameric library arrays on paper identified the sequence LRK(5)H (W45). Binding of W45 to cGPK resulted in selective inhibition of the kinase, with K(i) values of 0.8 .mu.M and 560 .mu.M for cGPK and cAPK, respectively. Cellular internalization of highly charged W45 was accomplished by N-terminal ***fusion*** of membrane translocation sequences from either the human immunodeficiency virus tyrosine aminotransferase protein (47-59) DT-2 or from the Drosophila ***Antennapedia*** ***homeodomain*** (43-58) DT-3, respectively. For both ***fusion*** peptides, DT-2 and DT-3, we observed a potentiating effect with respect to the inhibitory potency, with K(i) values 40- to 80-fold lower than W45. Fluorescein-labeled DT-2 and DT-3 demonstrated rapid translocation through the cytosol and nuclei in a time-dependent manner using cultured cells and intact tissue samples (cerebral arteries). The physiological effects of DT-2 and DT-3 as selective cGPK inhibitors in smooth muscle were studied in small intact arteries. Nitric oxide, a cyclic GMP/cGPK activator, elicited a concentration-dependent dilation of isolated rat cerebral arteries, which was markedly inhibited by DT-2 and DT-3. Collectively, these results indicate that DT-2 and DT-3 effectively inhibit nitric oxide-induced vasodilation, further emphasizing the central role for cGPK in the modulation of vascular contractility. .COPYRGT. 2002 Elsevier Science Inc. All rights reserved.

L9 ANSWER 30 OF 46 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2001425414 EMBASE
TI A peptide carrier for the delivery of biologically active proteins into mammalian cells.
AU Morris M.C.; Depollier J.; Mery J.; Heitz F.; Divita G.
CS G. Divita, Ctr. de Rech. de Bioche. Macromolec., UPR-1086 CNRS, 1919 Route de Mende, 34293 Montpellier, Cedex 5, France. divita@crbm.cnrs-mop.fr
SO Nature Biotechnology, (2001) 19/12 (1173-1176).
Refs: 20
ISSN: 1087-0156 CODEN: NABIF
CY United States
DT Journal; Article
FS 022 Human Genetics
037 Drug Literature Index
LA English
SL English
AB The development of peptide drugs and therapeutic proteins is limited by the poor permeability and the selectivity of the cell membrane. There is a growing effort to circumvent these problems by designing strategies to deliver full-length proteins into a large number of cells(1-3). A series of small protein domains, termed protein transduction domains (PTDs), have been shown to cross biological membranes efficiently and independently of transporters or specific receptors, and to promote the delivery of peptides and proteins into cells. TAT protein from human immunodeficiency virus (HIV-1) is able to deliver biologically active proteins in vivo and has been shown to be of considerable interest for protein therapeutics(4-9). Similarly, the third .alpha.-helix of ***Antennapedia*** ***homeodomain*** (10-12), and VP22 protein from herpes simplex virus(13,14) promote the delivery of covalently linked peptides or proteins into cells. However, these PTD vectors display a certain number of limitations in that they all require crosslinking to the target peptide or protein. Moreover, protein transduction using PTD-TAT ***fusion*** protein systems may require denaturation of the protein before delivery to increase the accessibility of the TAT-PTD domain. This requirement introduces an additional delay between the time of delivery and intracellular activation of the protein(1). In this report, we propose a new strategy for protein delivery based on a short amphipathic peptide carrier, Pep-1. This peptide carrier is able to efficiently deliver a variety of peptides and proteins into several cell lines in a fully biologically active form, without the need for prior chemical covalent coupling or denaturation steps. In addition, this peptide carrier presents several advantages for protein therapy, including stability in physiological buffer, lack of toxicity, and lack of sensitivity to serum. Pep-1 technology should be extremely useful for targeting specific protein-protein interactions in living cells and for screening novel therapeutic proteins.

L9 ANSWER 31 OF 46 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94199230 EMBASE
DN 1994199230
TI Homeodomain proteins in development and therapy.
AU Dorn A.; Affolter M.; Gehring W.J.; Leupin W.
CS Pharma Division, Preclinical Research, F. Hoffmann-La Roche Ltd,CH-4002 Basel, Switzerland
SO Pharmacology and Therapeutics, (1994) 61/1-2 (155-183).
ISSN: 0163-7258 CODEN: PHTHDT
CY United Kingdom
DT Journal; General Review
FS 022 Human Genetics
037 Drug Literature Index
LA English
SL English
AB Homeobox genes encode transcriptional regulators found in all organisms ranging from yeast to humans. In Drosophila, a specific class of homeobox genes, the homeotic genes, specifies the identity of certain spatial units of development. Their genomic organization, in Drosophila, as well as in vertebrates, is uniquely connected with their expression which follows a 5'- posterior-3'-anterior rule along the longitudinal body axis. The 180-bp homeobox is part of the coding sequence of these genes, and the sequence of 60 amino acids it encodes is referred to as the ***homeodomain*** . Structural analyses have shown that homeodomains consist of a helix-turn-helix motif that binds the DNA by inserting the recognition helix into the major groove of the DNA and its amino-terminal arm into the adjacent minor groove. Developmental as well as gene regulatory functions of homeobox genes are discussed, with special emphasis on one group, the ***Antennapedia*** (Antp) class homeobox genes and a representative 60-amino acid ***Antennapedia*** peptide (pAntp). In cultured neuronal cells, pAntp translocates through the membrane specifically and efficiently and accumulates in the nucleus. The internalization process is followed by a strong induction of neuronal morphological differentiation, which raises the possibility that motoneuron growth is controlled by ***homeodomain*** proteins. It has been demonstrated that ***chimeric*** peptide molecules encompassing pAntp are also captured by cultured neurons and conveyed to their nuclei. This may be of enormous interest for the internalization of drugs.

L9 ANSWER 32 OF 46 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 93219891 EMBASE
DN 1993219891
TI Control of cell fates in the central body region of C. elegans by the homeobox gene lin-39.
AU Clark S.G.; Chisholm A.D.; Horvitz H.R.
CS Department of Anatomy, University of California,San Francisco, CA 94143, United States
SO Cell, (1993) 74/1 (43-55).
ISSN: 0092-8674 CODEN: CELLB5
CY United States
DT Journal; Article
FS 004 Microbiology
LA English
SL English
AB Cells in the mid-body region of the nematode C. elegans develop differently from their anterior or posterior homologs. The gene lin-39 is required for mid-body region-specific development. In lin-39 mutants, mid-body cells express fates characteristic of more anterior or posterior homologs, and the migration of a neuroblast through the mid-body is defective. lin-39 acts cell autonomously in these mid-body cells and in the migrating neuroblast. lin-39 encodes a protein with an ***Antennapedia*** class ***homeodomain*** , most similar to those of the Drosophila homeotic genes Deformed and Sex combs reduced, and is located in a homeotic gene cluster with two other regional homeotic genes, mab-5 and egl-5. lin-39 and mab-5 function combinatorially in 2 ectodermal cells and have redundant functions in gonad development.

L9 ANSWER 33 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2002:185319 CAPLUS
DN 136:226793
TI Use of caveolin-1 scaffolding domain peptides to inhibit eNOS nitric oxide synthesis in the treatment of inflammation and cancer
IN Sessa, William C.
PA Yale University, USA
SO PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2002020768 | A2 | 20020314 | WO 2001-US42069 | 20010910 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2002077283 | A1 | 20020620 | US 2000-731023 | 20001207 |
| PRAI US 2000-231327P | P | 20000908 | | |
| US 2000-731023 | A | 20001207 | | |

AB The present invention relates to caveolin scaffolding domain-contg. peptides fused to the ***antennapedia*** ***homeodomain*** useful for treating various diseases such as inflammation and cancer. Furthermore, the present invention relates to compns. and methods of treatment which utilize peptides comprising at least one caveolin scaffolding domain. More specifically, methods for blocking the interaction of the caveolin-binding protein eNOS (endothelial nitric oxide synthase) to down regulate the activity of eNOS by administering caveolin ***fusion*** peptides are provided. Thus, eNOS activities such as acetylcholine-induced vasodilation, prostacyclin prodn. and nitric oxide

prodn. may be modulated using these methods. Hence, inflammation and tumor cell angiogenesis and proliferation are inhibited. The said ***fusion*** peptides comprise at least one caveolin scaffolding domain and at least one membrane translocation domain. Specifically, the membrane translocation domain comprises the third helix of the ***antennapedia*** ***homeodomain*** . Also included are methods for identifying agents that interact with eNOS or modulate its activity comprising exposing cells that express eNOS to the said ***fusion*** peptides and detg. the eNOS activity.

L9 ANSWER 34 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2001:816727 CAPLUS
DN 135:352789
TI Anti-inflammatory compounds inhibiting NF-.kappa.B-dependent target gene expression in a cell
IN May, Michael J.; Ghosh, Sankar
PA Yale University, USA
SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2001083547 | A2 | 20011108 | WO 2001-US40654 | 20010502 |
| WO 2001083547 | A3 | 20020516 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 2000-201261P P 20000502
US 2000-643260 A 20000822
AB The present invention provides anti-inflammatory compds., pharmaceutical compns. thereof, and methods of use thereof for treating inflammatory disorders. The present invention also provides methods of identifying anti-inflammatory compds. and methods of inhibiting NF-.kappa.B-dependent target gene expression in a cell.

L9 ANSWER 35 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2001:211242 CAPLUS
DN 134:305445
TI Vesicle-associated proteins and transmitter release from sympathetic ganglionic boutons
AU Blair, Duncan H.; Robson, Scott; King, Glenn; Bennett, Max R.
CS Neurobiology Lab., Univ. of Sydney, Sydney, NSW 2006, Australia
SO NeuroReport (2001), 12(3), 607-610
CODEN: NERPEZ; ISSN: 0959-4965
PB Lippincott Williams & Wilkins
DT Journal
LA English
AB A method is reported for introducing peptides derived from SNARE proteins that control exocytosis of vesicles. at boutons formed by sympathetic ganglion cells in tissue culture. These peptides were coupled to the ***DNA*** ***binding*** ***domain*** of the Drosophila transcription factor ***antennapedia*** , called penetratin. This facilitated the passage of peptides across the bouton membrane. FMI-43 was used to monitor the exocytosis of transmitter from depolarized boutons after their exposure to the penetratin-peptide sequences IETRHNEIIKLETSIRELHD of syntaxin and KGFLSSLFGGSSK of .alpha.-SNAP both of which blocked secretion, whereas the peptide sequences SELDDRADALQAGASQFETSAAKLKRK of synaptobrevin did not. This report introduces a readily applicable method for detg. the effect of different peptide sequences of vesicle-assocd. proteins on secretion at vertebrate boutons and presents an account of the effects of a selection of such peptides on exocytosis.
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 36 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2001:77376 CAPLUS
DN 134:220100
TI Efficient intracellular delivery of GFP by homeodomains of Drosophila Fushi-tarazu and Engrailed proteins
AU Han, Kyuhyung; Jeon, Min-Jae; Kim, Kyeong-Ae; Park, Jinseu; Choi, Soo Young
CS Department of Genetic Engineering, Division of Life Sciences, Hallym University, Chunchon, 200-702, S. Korea
SO Molecules and Cells (2000), 10(6), 728-732
CODEN: MOCEEK; ISSN: 1016-8478
PB Springer-Verlag Singapore Pte. Ltd.
DT Journal
LA English
AB The 60 amino acid long ***homeodomain*** of ***Antennapedia*** (Antp), either alone or as a ***fusion*** protein with 30-40 amino acid long foreign polypeptides, has been reported to cross biol. membranes by an energy- and receptor- protein-independent mechanism. Moreover, the 16 amino acid long third helix of the Antp ***homeodomain*** , so-called penetratin, possesses translocation properties when fused to fewer than 100 amino acids as well. These findings led the authors to study whether such a protein transduction property is shared by other homeodomains. The authors report that homeodomains of two homeoproteins, Fushi-tarazu and Engrailed, are able to transduce a 238 amino acid long green fluorescent protein into cultured cells as efficiently as other well-known protein transduction domains, such as an internal oligopeptide of Tat and penetratin. These findings suggest that such transduction activity of homeodomains might have some physiol. roles and that it can be exploited for development of efficient transduction vectors for research use and protein therapy.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 37 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2000:401851 CAPLUS
DN 133:53685
TI Protein transduction system and methods of use thereof
IN Dowdy, Steven F.
PA Washington University, USA
SO PCT Int. Appl., 127 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000034308 | A2 | 20000615 | WO 1999-US29289 | 19991210 |
| WO 2000034308 | A3 | 20001019 | | |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| AU 2000021728 | A1 | 20000626 | AU 2000-21728 | 19991210 |
| EP 1137664 | A2 | 20011004 | EP 1999-966101 | 19991210 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI US 1998-111701P P 19981210
WO 1999-US29289 W 19991210
OS MARPAT 133:53685
AB The present invention provides a protein transduction system comprising one or more ***fusion*** proteins that includes a transduction domain and a cytotoxic domain. The cytotoxic domain is specifically activated in a cell exhibiting a unique characteristic. Further provided are protein transduction domains that provide enhanced transduction efficiency. The protein transduction system effectively kills or injures cells infected by one or a combination of different pathogens or cells exhibiting unique characteristics such as high levels of heavy metals, DNA damage or uncontrolled cell division.

L9 ANSWER 38 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2000:351544 CAPLUS
DN 133:9081
TI Modified and truncated penetratin derivatives as membrane translocation carriers for drug transport
IN Fischer, M. Peter; Zhelev, Nikolai
PA Cyclacel Limited, UK
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000029427 | A2 | 20000525 | WO 1999-GB3750 | 19991111 |
| WO 2000029427 | A3 | 20001005 | | |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| GB 2346616 | A1 | 20000816 | GB 1999-26719 | 19991111 |
| EP 1135410 | A2 | 20010926 | EP 1999-954212 | 19991111 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

| | | | | |
|---|---|---|---|---|
| US 2002098238 | A1 | 20020725 | US 2001-854204 | 20010511 |

PRAI GB 1998-25000 A 19981113
GB 1998-25001 A 19981113
GB 1999-2522 A 19990204
GB 1999-2525 A 19990204
GB 1999-14578 A 19990622
WO 1999-GB3750 W 19991111

US 1999-438460 A3 19991112
AB The invention relates to modified and truncated forms of the membrane transport vector penetratin, a peptide comprising residues 45-58 of the ***Antennapedia*** ***homeodomain*** protein. Such truncated forms include 7-mer peptides that may in themselves include further variation. Such smaller or truncated forms of penetratin are advantageous in that they are more acceptable to the pharmaceutical industry as delivery carrier moieties, by virtue of the carrier-cargo ***conjugate*** having an advantageous immunogenicity, soly., and clearance, and in some cases advantageous efficacy as compared to using a ***conjugate*** comprised of full length penetratin. Carrier moieties are synthetically linked to a cargo moiety selected from p21WAF-derived peptides, p16-derived peptides or the drugs roscovitine, taxol, or a podophyllotoxin. The truncated penetratin-podophyllotoxin ***conjugate*** , for example, is more effective in terms of anti-proliferative activity on tumor cells while exhibiting lower generalized toxicity.

L9 ANSWER 39 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 2000:12753 CAPLUS
DN 132:61274
TI Method for studying interactions of cellular molecules and their localization in cells using fluorescent-labeled ***fusion*** proteins
IN Paysan, Jacques; Antz, Christof
PA Germany
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI EP 969284 | A1 | 20000105 | EP 1999-112544 | 19990701 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| DE 19829495 | A1 | 20000105 | DE 1998-19829495 | 19980702 |
| PRAI DE 1998-19829495 A | | 19980702 | | |

AB The invention concerns the localization of cellular processes by using fluorescence labeled ***fusion*** proteins that contain a membrane-translocating peptide and the affinity protein to the target mol. (antibody) and detecting by fluorescence resonance energy transfer (FRET) based on the interaction of fluorescent green protein or its analogs that form ***fusion*** proteins with the target mol. in the cell and the fluorescent labeled protein that is transported into the cell. Membrane-translocating peptides are 16 amino acid fragments of ***antennapedia*** ***homeodomain*** peptide and a point mutation of that peptide. Target-specific peptides are selected with phage display or yeast-2-hybrid interaction screening. Various fluorescent indicators are used, e.g. BODIPY, fluorescein, etc. The method is used to study bacterial, insect, yeast or mammalian cells by FRET-microscopy or FACS.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 40 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1999:215551 CAPLUS
DN 130:247829
TI Introduction of peptides and oligonucleotides into neurons as homeodomain ***fusions***
IN Joliot, Alain; Prochiantz, Alain
PA Centre National de la Recherche Scientifique (CNRS), Fr.
SO U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 828,995, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 5888762 | A | 19990330 | US 1994-238518 | 19940505 |
| FR 2662698 | A1 | 19911206 | FR 1990-6912 | 19900605 |
| FR 2662698 | B1 | 19950324 | | |
| PRAI FR 1990-6912 | A | 19900605 | | |
| US 1992-828995 | B2 | 19920327 | | |

AB The invention relates to a method for introducing a macromol. comprising at least the helix 3 of a homeobox peptide into a living cell. Thus, the 60-amino acid ***homeodomain*** of Drosophila ***Antennapedia*** protein (pAntp) was taken up by neurons and most of the protein was localized to the nucleus. A peptide consisting of residues 43-58 of pAntp was the shortest peptide which displayed this property. Tyr-36,Ala-50-pAntp and Pro-40,Pro-41-pAntp were also taken up, but, unlike the wild-type pAntp, did not stimulate neurite growth. 43-58-PAntp disulfide linked to a peptide inhibitor of protein kinase C or to an antisense oligonucleotide complementary to a sequence including the amyloid precursor protein (APP) gene ATG initiation codon were prepd. Neurons incubated with these constructs displayed reduced protein kinase C activity or reduced APP levels.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 41 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1999:189225 CAPLUS
DN 130:219148
TI ***Chimeric*** proteins containing the ***homeodomain*** of ***antennapedia*** and uses thereof
IN Crisanti, Andrea
PA Imperial College Innovations Limited, UK
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9911809 | A1 | 19990311 | WO 1998-GB2628 | 19980902 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2301157 | AA | 19990311 | CA 1998-2301157 | 19980902 |
| AU 9888776 | A1 | 19990322 | AU 1998-88776 | 19980902 |
| AU 737829 | B2 | 20010830 | | |
| EP 1009847 | A1 | 20000621 | EP 1998-940453 | 19980902 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001514858 | T2 | 20010918 | JP 2000-508817 | 19980902 |
| BR 9811744 | A | 20020102 | BR 1998-11744 | 19980902 |
| PRAI GB 1997-18609 | A | 19970902 | | |
| WO 1998-GB2628 | W | 19980902 | | |

AB The invention provides a ***chimeric*** protein comprising: (a) a first region comprising the ***homeodomain*** of ***antennapedia*** or a variant thereof; and (b) a second region not naturally assocd. with the first region comprising a protein of at least 100 amino acids. The ***antennapedia*** gene encodes a transcription factor that is known to bind to specific DNA target elements and is able to translocate proteins and nucleic acids across the cytoplasmic membrane of mammalian cells. Thus, the invention can be used to deliver drugs, nucleic acids, or proteins into cells.
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 42 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1997:286780 CAPLUS
DN 126:259163
TI INK4 protein p16-derived peptides or peptide mimetics that bind by cyclin-dependent kinases, inhibit Rb protein phosphorylation, and are useful for treating hyperproliferative disorders
IN Fahraeus, Robin; Lane, David Philip
PA University of Dundee, UK; Fahraeus, Robin; Lane, David Philip
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9711174 | A1 | 19970327 | WO 1996-GB2340 | 19960923 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG | | | | |
| AU 9669967 | A1 | 19970409 | AU 1996-69967 | 19960923 |
| EP 851922 | A1 | 19980708 | EP 1996-931174 | 19960923 |
| EP 851922 | B1 | 19991229 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| ES 2143780 | T3 | 20000516 | ES 1996-931174 | 19960923 |
| JP 2001507669 | T2 | 20010612 | JP 1997-512498 | 19960923 |
| PRAI GB 1995-19275 | A | 19950921 | | |
| WO 1996-GB2340 | W | 19960923 | | |

AB The present invention identifies substances which bind to cyclin-dependent kinase (cdk) comprising: (i) a peptide including amino acid residues 84 to 103 of full length INK4 p16 protein, or an active portion or deriv. thereof; or (ii) a functional mimetic of the fragment, active portion or deriv. These substances are useful in tumor suppression by inhibiting the phosphorylation of Rb protein. Also described herein is the resoln. of the amino acid motifs responsible for binding cdks, an FLD motif, corresponding to amino acid residues 90 to 92 of full length p16 protein, and an LVVL motif, corresponding to amino acid residues 94 to 97 of full length p16 protein. The substances disclosed herein can be used in the treatment of hyperproliferative disorders and to screen and design mols. having the similar properties.

L9 ANSWER 43 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1994:570701 CAPLUS
DN 121:170701
TI Neuronal polarity and morphogenesis
AU Lafont, F.; Joliot, A. H.; Perez, F.; Prochiantz, A.

CS Ec. Norm. Super., Paris, 75230, Fr.
SO NeuroProtocols (1994), 4(2), 129-33
CODEN: NEPREV; ISSN: 1058-6741
DT Journal
LA English
AB For a given neuron, the development of its axonal and dendritic arborizations depends on many external factors, such as matrix mols., growth factors, depolarization, elec. fields, and adhesion mols. In this paper, the authors summarize and comment on several protocols that can be used to modulate axonal or dendritic elongation and/or modify the shape of the neurites. A first series of protocols is based on the modulation of neuron substratum adhesion by the addn. of extracellular matrix mols. Indeed, axons initiate and elongate under low adhesion conditions, whereas dendrites grow only on highly adhesive substrata. A second series of protocols involves the use of drugs affecting the organization of the cytoskeleton. They suggest that the different behaviors of the axonal and dendritic compartments, in particular under low adhesion conditions, are due partly to the organization of the microtubule and actin networks. Third, the authors describe a protocol based on the internalization of ***Antennapedia*** ***homeodomain*** that translocates through the cell membrane and is conveyed to neuronal nuclei. Using this technique, the authors demonstrated that homeoproteins are involved in the morphol. differentiation of postmitotic neurons and, in the case of the motoneurons, in axonal elongation. Furthermore, ***fusion*** polypeptides up to 109 amino acids and encompassing the 60-amino-acid translocating ***homeodomain*** are also transported through the membrane, thus offering a way to introduce exogenous biol. active peptides into live neurons.

L9 ANSWER 44 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1994:98122 CAPLUS
DN 120:98122
TI DNA affinity cleaving analysis of homeodomain-DNA interaction: identification of homeodomain consensus sites in genomic DNA
AU Shang, Zhigang; Ebright, Yon W.; Iler, Nancy; Pendergrast, P. Shannon; Echelard, Yann; McMahon, Andrew P.; Ebright, Richard H.; Abate, Cory
CS Cent. Adv. Biotechnol. Med., Piscataway, NJ, 08854, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1994), 91(1), 118-22
CODEN: PNASA6; ISSN: 0027-8424
DT Journal
LA English
AB The authors have incorporated the DNA-cleaving moiety o-phenanthroline-copper at amino acid 10 of the Msx-1 ***homeodomain*** , and the authors have analyzed site-specific DNA cleavage by the resulting Msx-1 deriv. The authors show that amino acid 10 of the Msx-1 ***homeodomain*** is close to the 5' end of the consensus DNA site 5'-(C/G)TAATTG-3' in the Msx-1-DNA complex. The authors' results indicate that the orientation of the Msx-1 ***homeodomain*** relative to DNA is analogous to the orientation of the engrailed and ***Antennapedia*** homeodomains. The authors show further that DNA affinity cleaving permits identification of consensus DNA sites for Msx-1 in kilobase DNA substrates. The specificity of the approach enabled the authors to identify an Msx-1 consensus DNA site within the transcriptional control region of the developmental regulatory gene Wnt-1. The authors propose that incorporation of o-phenanthroline-copper at amino acid 10 of a ***homeodomain*** may provide a generalizable strategy to det. the orientation of a ***homeodomain*** relative to DNa and to identify ***homeodomain*** consensus DNA sites in genomic DNA.

L9 ANSWER 45 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1993:464828 CAPLUS
DN 119:64828
TI The segment identity functions of Ultrabithorax are contained within its homeo domain and carboxy-terminal sequences
AU Chan, Siu Kwong; Mann, Richard S.
CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA
SO Genes & Development (1993), 7(5), 796-811
CODEN: GEDEEP; ISSN: 0890-9369
DT Journal
LA English
AB Using an in vivo assay for segment identity, the structural differences that distinguish two Drosophila homeotic selector proteins, Ultrabithorax (Ubx) and Antennapedia (Antp), have been investigated. There are at least two independent parts of Ubx and Antp that contribute to their functional specificities: (1) their homeo domains and (2) residues carboxy-terminal to their homeo domains (C-tails). In the absence of any C-tail, differences in 5 homeo domain amino acids are sufficient to distinguish between the functions of Ubx and Antp. Two of these are at the amino terminus of the homeo domain and could contact DNA directly. A three dimensional model suggests that the other 3 homeo domain residues and the C-tails are unlikely to contact DNA. In addn., it is demonstrated that the assay used to measure the segment identity functions of Ubx and Antp is independent of any homeotic selector gene normally active in thoracic and abdominal segments. This expectation is confirmed for at least one Ubx target gene, Distal-less.

L9 ANSWER 46 OF 46 CAPLUS COPYRIGHT 2002 ACS
AN 1992:189036 CAPLUS
DN 116:189036
TI Antp-type homeodomains have distinct DNA binding specifities that correlate with their different regulatory functions in embryos
AU Dessain, Scott; Gross, Cornelius T.; Kuziora, Michael A.; McGinnis, William
CS Dep. Biol., Yale Univ., New Haven, CT, 06511, USA
SO EMBO J. (1992), 11(3), 991-1002
CODEN: EMJODG; ISSN: 0261-4189
DT Journal
LA English
AB Much of the functional specificity of Drosophila homeotic selector proteins, in their ability to regulate specific genes and to assign specific segmental identities, appears to map within their different, but closely related homeodomains. For example, the Drosophila Dfd and human HOX4B (Hox 4.2) proteins, which have extensive structural similarity only in their resp. homeodomains, both specifically activate the Dfd promoter. In contrast, a ***chimeric*** Dfd protein contg. the Ubx homeodomain (Dfd/Ubx) specifically activates the Antp P1 promoter, which is normally targeted by Ubx. Using a variety of DNA binding assays, significant differences were found in DNA binding preferences between the Dfd, Dfd/Ubx and Ubx proteins when Dfd and Antp upstream regulatory sequences are used as binding substrates. No significant differences in DNA binding specificity were detected between the human HOX4B (Hox 4.2) and Drosophila Dfd proteins. All of these full-length proteins bound as monomers to high affinity DNA binding sites, and interference assays indicate that they interact with DNA in a way that is very similar to homeodomain polypeptides. These expts. indicate that the ninth amino acid of the recognition helix of the homeodomain, which is glutamine in all four of these Antp-type homeodomain proteins, is not sufficient to det. their DNA binding specificities. The good correlation between the in vitro DNA binding preferences of these four Antp-type homeodomain proteins and their ability to specifically regulate a Dfd enhancer element in the embryo, suggests that the modest binding differences that distinguish them make an important contribution to the unique regulatory specificities.

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NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA

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=> s antp or ant
L1 17436 ANTP OR ANT

=> s l1 and conjugat?
L2 127 L1 AND CONJUGAT?

=> s l2 and disulfide bond
L3 1 L2 AND DISULFIDE BOND

=> d bib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 2001:851787 CAPLUS
DN 136:11089
TI Compound containing a labile ***disulfide*** ***bond***
IN Wolff, Jon A.; Monahan, Sean D.; Budker, Vladimir G.; Slattum, Paul M.; Rozema, David B.
PA USA
SO U.S. Pat. Appl. Publ., 23 pp., Cont.-in-part of U.S. Ser. No. 312,351.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 2001044417 | A1 | 20011122 | US 2001-779791 | 20010208 |
| PRAI US 1999-312351 | A2 | 19990514 | | |

AB A labile disulfide-contg. compd. under physiol. conditions contg. a labile ***disulfide*** ***bond*** and a transduction signal is disclosed. A process for delivery of a compd. to a cell, comprising assocg. a compd. contg. a ***disulfide*** ***bond*** that can be cleaved under physiol. conditions, with a polymer, then delivering the polymer to the cell. The polymer may comprise a first polymer and a second polymer. The first polymer and the second polymer may comprise nucleic acids, proteins, genes, antisense polymers, DNA/RNA hybrids, or synthetic polymers.

=> s l2 and py<=1997
1 FILES SEARCHED...
L4 62 L2 AND PY<=1997

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 52 DUP REM L4 (10 DUPLICATES REMOVED)

=> s l5 and homeodomain
L6 0 L5 AND HOMEODOMAIN

=> d bib abs 1-10
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L1 17436 SEA ANTP OR ANT
L2 127 SEA L1 AND CONJUGAT?
L4 62 SEA L2 AND PY<=1997
L5 52 DUP REM L4 (10 DUPLICATES REMOVED)
L6 0 SEA L5 AND HOMEODOMAIN

=> s l1 and homeodomain
L7 204 L1 AND HOMEODOMAIN

=> s l7 and conjugat?
L8 0 L7 AND CONJUGAT?

=> s l7 and (fusion or chimer?)
L9 33 L7 AND (FUSION OR CHIMER?)

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10 14 DUP REM L9 (19 DUPLICATES REMOVED)

=> d bib abs 1-
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L10 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 2001:77376 CAPLUS
DN 134:220100
TI Efficient intracellular delivery of GFP by homeodomains of Drosophila Fushi-tarazu and Engrailed proteins
AU Han, Kyuhyung; Jeon, Min-Jae; Kim, Kyeong-Ae; Park, Jinseu; Choi, Soo Young
CS Department of Genetic Engineering, Division of Life Sciences, Hallym University, Chunchon, 200-702, S. Korea
SO Molecules and Cells (2000), 10(6), 728-732
CODEN: MOCEEK; ISSN: 1016-8478
PB Springer-Verlag Singapore Pte. Ltd.
DT Journal
LA English
AB The 60 amino acid long ***homeodomain*** of Antennapedia ( ***Antp*** ), either alone or as a ***fusion*** protein with 30-40 amino acid long foreign polypeptides, has been reported to cross biol. membranes by an energy- and receptor- protein-independent mechanism. Moreover, the 16 amino acid long third helix of the ***Antp*** ***homeodomain*** , so-called penetratin, possesses translocation properties when fused to fewer than 100 amino acids as well. These findings led the authors to study whether such a protein transduction property is shared by other homeodomains. The authors report that homeodomains of two homeoproteins, Fushi-tarazu and Engrailed, are able to transduce a 238 amino acid long green fluorescent protein into cultured cells as efficiently as other well-known protein transduction domains, such as an internal oligopeptide of Tat and penetratin. These findings suggest that such transduction activity of homeodomains might have some physiol. roles and that it can be exploited for development of efficient transduction vectors for research use and protein therapy.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
1
AN 1997:274126 BIOSIS
DN PREV199799565844
TI DNA binding sites recognised in vitro by a knotted class 1 ***homeodomain*** protein encoded by the hooded gene, k, in barley (Hordeum vulgare.
AU Krusell, Lene; Rasmussen, Inge; Gausing, Kirsten (1)
CS (1) Dep. Mol. Struct. Biol., Univ. Aarhus, DK-8000 Aarhus C Denmark
SO FEBS Letters, (1997) Vol. 408, No. 1, pp. 25-29.
ISSN: 0014-5793.
DT Article
LA English
AB The ***homeodomain*** of the knotted classes of transcription factors from plants differs from the well characterized ***Antp*** /En type homeodomains from Drosophila at key amino acid residues contributing to the DNA binding. A cDNA, Hvh21, derived from the hooded gene and encoding a full length homolog of knotted1 from maize was isolated from barley seedlings and expressed as a maltose binding protein ***fusion*** in E. coli. The purified HvH21- ***fusion*** protein selected DNA fragments with 1-3 copies of the sequence TGAC. Gel shift experiments showed that the TGAC element was required for binding and the results further indicate that the HvH21- ***fusion*** protein binds DNA as a monomer.

L10 ANSWER 3 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 95079533 EMBASE
DN 1995079533
TI Levels of homeotic protein function can determine developmental identity: Evidence from low-level expression of the Drosophila homeotic gene proboscipedia under Hsp7O control.
AU Cribbs D.L.; Benassayag C.; Randazzo F.M.; Kaufman T.C.
CS Howard Hughes Medical Institute, Department of Biology, Indiana University,Bloomington, IN 47405, United States
SO EMBO Journal, (1995) 14/4 (767-778).
ISSN: 0261-4189 CODEN: EMJODG
CY United Kingdom
DT Journal; Article
FS 001 Anatomy, Anthropology, Embryology and Histology
021 Developmental Biology and Teratology
022 Human Genetics
LA English
SL English
AB The autonomous selector capacity of the homeotic proboscipedia (pb) gene of the Drosophila Antennapedia Complex was tested. We introduced into the germline a P element containing a transcriptional ***fusion*** of a mini-gene for pb (normally required for formation of the labial and maxillary palps of the mouthparts) and the Hsp70 promoter. Uninduced

expression of this Hsp70:pb element (HSPB) directs a novel, fully penetrant dominant transformation of antennae toward maxillary palps. Gene dosage experiments varying the number of HSPB elements indicate that the extent of the dominant transformation depends on the level of PB protein. At the same time, expression from the transgene also rescues recessive pb mutations. Finally, HSPB function may override the dominant antennal transformations caused by Antennapedia ( ***Antp*** ) mutations in a dose-sensitive manner, directing a switch of the antennal disc-derived appendage from ectopic leg to ectopic maxillary palp. This switch correlated with strikingly reduced ***ANTP*** protein accumulation when PB concentrations exceeded a genetically defined threshold level. These observations support a crucial role for quantitative aspects of pb function in determining segmental identity, including cross-regulatory events involved in this determination.

L10 ANSWER 4 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
2
AN 1996:60056 BIOSIS
DN PREV199698632191
TI Sequence and expression of grasshopper antennapedia: Comparison to Drosophila.
AU Hayward, David C. (1); Patel, Nipam H.; Rehm, E. Jay; Goodman, Corey S.; Ball, Eldon E.
CS (1) Molecular Evolution and Systematics Group, Res. Sch. Biol. Sci., Aust. Natl. Univ., P.O. Box 475, Canberra, ACT 2601 Australia
SO Developmental Biology, (1995) Vol. 172, No. 2, pp. 452-465.
ISSN: 0012-1606.
DT Article
LA English
AB We have cloned and characterized the Antennapedia ( ***Antp*** ) gene from the grasshopper Schistocerca americana. The Antennapedia protein contains seven blocks of sequence, including the ***homeodomain*** , that are conserved in the homologous proteins of other insects, interspersed with (usually repetitive) sequences unique to each species. There is no similarity between 1.8 kb of 3' untranslated sequence in grasshopper and Drosophila. We examined Antennapedia protein expression in grasshopper using an antibody raised against a grasshopper ***fusion*** protein and reexamined its expression in Drosophila using several different antibodies. Early patterns of expression in the two insects are quite different, reflecting differing modes of early development. However, by the germband stage, expression patterns are quite similar, with relatively uniform epithelial expression throughout the thoracic and abdominal segments which later retracts to the thorax. Expression is observed in muscle pioneers, the peripheral nervous system, and the central nervous system (CNS). In the CNS expression is initially limited to a few neurons, but eventually becomes widespread. Both insects show strong expression in certain homologous identified neurons and similar temporal modulation of expression.

L10 ANSWER 5 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
3
AN 1994:405154 BIOSIS
DN PREV199497418154
TI A differential response element for the homeotics at the Antennapedia P1 promoter of Drosophila.
AU Saffman, Emma E.; Krasnow, Mark A. (1)
CS (1) Dep. Biochem., Stanford Univ., Stanford, CA 94305 USA
SO Proceedings of the National Academy of Sciences of the United States of America, (1994) Vol. 91, No. 16, pp. 7420-7424.
ISSN: 0027-8424.
DT Article
LA English
AB Homeotic genes encode DNA-binding transcription factors that specify the identity of a segment or segments in particular body regions of Drosophila. The developmental specificity of these proteins results from their differential regulation of various target genes. This specificity could be achieved by use of different regulatory elements by the homeoproteins or by use of the same elements in different ways. The Ultrabithorax (UBX), abdominal-A (ABD-A), and Antennapedia ( ***ANTP*** ) homeoproteins differentially regulate the Antennapedia PI promoter in a cell culture cotransfection assay: UBX and ABD-A repress, whereas ***ANTP*** activates P1. Either of two regions of P1 can confer this pattern of differential regulation. One of the regions lies downstream and contains homeoprotein-binding sites flanking a 37-bp region called BetBS. ***ANTP*** protein activates transcription through the binding sites, whereas UBX and ABD-A both activate transcription through BetBS and use the flanking binding sites to prevent this effect. Thus, homeoproteins can use the same regulatory element but in very different ways. ***Chimeric*** UBX- ***ANTP*** proteins and UBX deletion derivatives demonstrate that functional specificity in P1 regulation is dictated mainly by sequences outside the ***homeodomain*** , with important determinants in the N-terminal region of the proteins.

L10 ANSWER 6 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 4
AN 94199230 EMBASE
DN 1994199230
TI ***Homeodomain*** proteins in development and therapy.
AU Dorn A.; Affolter M.; Gehring W.J.; Leupin W.
CS Pharma Division, Preclinical Research, F. Hoffmann-La Roche Ltd,CH-4002 Basel, Switzerland
SO Pharmacology and Therapeutics, (1994) 61/1-2 (155-183).
ISSN: 0163-7258 CODEN: PHTHDT
CY United Kingdom
DT Journal; General Review
FS 022 Human Genetics
037 Drug Literature Index
LA English
SL English
AB Homeobox genes encode transcriptional regulators found in all organisms ranging from yeast to humans. In Drosophila, a specific class of homeobox genes, the homeotic genes, specifies the identity of certain spatial units of development. Their genomic organization, in Drosophila, as well as in vertebrates, is uniquely connected with their expression which follows a 5'- posterior-3'-anterior rule along the longitudinal body axis. The 180-bp homeobox is part of the coding sequence of these genes, and the sequence of 60 amino acids it encodes is referred to as the ***homeodomain*** . Structural analyses have shown that homeodomains consist of a helix-turn-helix motif that binds the DNA by inserting the recognition helix into the major groove of the DNA and its amino-terminal arm into the adjacent minor groove. Developmental as well as gene regulatory functions of homeobox genes are discussed, with special emphasis on one group, the Antennapedia ( ***Antp*** ) class homeobox genes and a representative 60-amino acid Antennapedia peptide (pAntp). In cultured neuronal cells, pAntp translocates through the membrane specifically and efficiently and accumulates in the nucleus. The internalization process is followed by a strong induction of neuronal morphological differentiation, which raises the possibility that motoneuron growth is controlled by ***homeodomain*** proteins. It has been demonstrated that ***chimeric*** peptide molecules encompassing pAntp are also captured by cultured neurons and conveyed to their nuclei. This may be of enormous interest for the internalization of drugs.

L10 ANSWER 7 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
5
AN 1995:86283 BIOSIS
DN PREV199598100583
TI The C-terminus of the ***homeodomain*** is required for functional specificity of the Drosophila rough gene.
AU Heberlein, Ulrike; Penton, Andrea; Falsafi, Sima; Hackett, Davie; Rubin, Gerald M.
CS Gallo Cent. Dep. Neurol., Build. 1, Room 101, Univ. Calfiornia San Francisco, San Francisco Gen. Hosp., San Francisco, CA 94110 USA
SO Mechanisms of Development, (1994) Vol. 48, No. 1, pp. 35-49.
ISSN: 0925-4773.
DT Article
LA English
AB In contrast to most Drosophila homeobox genes, which are required during embryogenesis, the rough gene is involved in photoreceptor cell specification in the compound eye. Taking advantage of the viability of null rough alleles and the small size of the rough gene, we have combined in vivo and in vitro mutagenesis to define important functional domains in the rough protein. All missense mutations found to disrupt rough function mapped to highly conserved amino acids in the ***homeodomain*** (HD), suggesting that the nature of few, if any, single amino acids outside the HD is critical for rough activity. The analysis of ***chimeric*** proteins, in which the whole HD or parts of it were swapped between the rough and Antennapedia ( ***Antp*** ) proteins, revealed that the C-terminus of the rough HD is important for rough activity in vivo. This C-terminal region was also found to be required for the recognition of rough binding sites in vitro. Our data suggest that amino acids located in the C-terminus of the ***homeodomain*** may play important roles in selective binding site recognition.

L10 ANSWER 8 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
6
AN 1993:387956 BIOSIS
DN PREV199396063256
TI Functional specificity of the antennapedia ***homeodomain*** .
AU Furukubo-Tokunaga, Katsuo (1); Flister, Susanne; Gehring, Walter J.
CS (1) Dep. Neurobiology, Zoologiscches Inst., Univ. Basel, Rheinsprung 9, CH-4051 Basel Switzerland
SO Proceedings of the National Academy of Sciences of the United States of America, (1993) Vol. 90, No. 13, pp. 6360-6364.
ISSN: 0027-8424.
DT Article
LA English
AB The segmental identity in animal development is determined by a set of homeotic selector genes clustered in the invertebrate HOM or vertebrate Hox homeo box complexes. These genes encode proteins with very similar homeodomains and highly diverged N- and C-terminal sequences. The Antennapedia ( ***Antp*** ) ***homeodomain*** , for instance, differs at only five amino acid positions from that of Sex combs reduced (Scr) protein. Using a heat shock assay in which ***chimeric*** ***Antp*** -Scr proteins are expressed ectopically in Drosophila, we have shown that the functional specificity of the ***Antp*** protein is determined by the four specific amino acids located in the flexible N-terminal arm of the ***homeodomain*** . The three-dimensional structure of the ***Antp*** ***homeodomain*** -DNA complex shows that this N-terminal arm is located in the minor groove of the DNA, suggesting that the functional specificity is determined either by slight differences in DNA binding and/or by selective interactions with other transcription

factor(s).

L10 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1993:464828 CAPLUS
DN 119:64828
TI The segment identity functions of Ultrabithorax are contained within its homeo domain and carboxy-terminal sequences
AU Chan, Siu Kwong; Mann, Richard S.
CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA
SO Genes & Development (1993), 7(5), 796-811
CODEN: GEDEEP; ISSN: 0890-9369
DT Journal
LA English
AB Using an in vivo assay for segment identity, the structural differences that distinguish two Drosophila homeotic selector proteins, Ultrabithorax (Ubx) and Antennapedia ( ***Antp*** ), have been investigated. There are at least two independent parts of Ubx and ***Antp*** that contribute to their functional specificities: (1) their homeo domains and (2) residues carboxy-terminal to their homeo domains (C-tails). In the absence of any C-tail, differences in 5 homeo domain amino acids are sufficient to distinguish between the functions of Ubx and ***Antp*** . Two of these are at the amino terminus of the homeo domain and could contact DNA directly. A three dimensional model suggests that the other 3 homeo domain residues and the C-tails are unlikely to contact DNA. In addn., it is demonstrated that the assay used to measure the segment identity functions of Ubx and ***Antp*** is independent of any homeotic selector gene normally active in thoracic and abdominal segments. This expectation is confirmed for at least one Ubx target gene, Distal-less.

L10 ANSWER 10 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
7
AN 1993:387753 BIOSIS
DN PREV199396063053
TI Ectopic expression and function of the ***Antp*** and Scr homeotic genes: The N-terminus of the ***homeodomain*** is critical to functional specificity.
AU Zeng, Wenlin; Andrew, Deborah J.; Mathies, Laura; Horner, Michael A.; Scott, Matthew P. (1)
CS (1) Dep. Dev. Biol. and Genetics, Stanford Univ. Sch. Med., Stanford, CA 94305-5427 USA
SO Development (Cambridge), (1993) Vol. 118, No. 2, pp. 339-352.
ISSN: 0950-1991.
DT Article
LA English
AB The transcription factors encoded by homeotic genes determine cell fates during development. Each homeotic protein causes cells to follow a distinct pathway, presumably by differentially regulating downstream 'target' genes. The ***homeodomain*** , the DNA-binding part of homeotic proteins, is necessary for conferring the specificity of each homeotic protein's action. The two Drosophila homeotic proteins encoded by Antennapedia and Sex combs reduced determine cell fates in the epidermis and internal issues of the posterior head and thorax. Genes encoding ***chimeric*** ***Antp*** /Scr proteins were introduced into flies and their effects on morphology and target gene regulation observed. We find that the N terminus of the ***homeodomain*** is critical for determining the specific effects of these homeotic proteins in vivo, but other parts of the proteins have some influence as well. The N-terminal part of the ***homeodomain*** has been observed, in crystal structures and in NMR studies in solution, to contact the minor groove of the DNA. The different effects of Antennapedia and Sex combs reduced proteins in vivo may depend on differences in DNA binding, protein-protein interactions, or both.

L10 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
AN 1992:441878 CAPLUS
DN 117:41878
TI In vivo analysis of the helix-turn-helix motif of the fushi tarazu homeo domain of Drosophila melanogaster
AU Furukubo-Tokunaga, Katsuo; Mueller, Martin; Affolter, Markus; Pick, Leslie; Kloter, Urs; Gehring, Walter J.
CS Biozentr., Univ. Basel, Basel, CH-4056, Switz.
SO Genes Dev. (1992), 6(6), 1082-96
CODEN: GEDEEP; ISSN: 0890-9369
DT Journal
LA English
AB A systematic mutational anal. of the helix-turn-helix motif (HTH) of the fushi tarazu (ftz) homeo domain (HD) of Drosophila is reported. The function of ***chimeric*** ftz proteins contg. either a part of the Sex combs reduced (Scr) or the muscle segment homeobox (msh) HDs were tested. By complementation tests in transgenic flies, cotransfection assays in cultured Drosophila cells and in vitro DNA-binding assays, the ftz activity was found to be retained in the ftz-Scr ***chimera*** but was lost in the ftz-msh ***chimera*** , which is defective in binding to an Antennapedia ( ***Antp*** )-class target site. Further studies with a series of back-mutants of the ftz-msh ***chimera*** revealed that a set of class-specific DNA backbone-contacting residues in the HTH, particularly Arg-28 and Arg-43, are required for efficient target site recognition and, hence, full ftz activity both in vitro and in vivo.

L10 ANSWER 12 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
8
AN 1992:232736 BIOSIS
DN BA93:120761
TI ***ANTP*** -TYPE HOMEODOMAINS HAVE DISTINCT DNA BINDING SPECIFICITIES
THAT CORRELATE WITH THEIR DIFFERENT REGULATORY FUNCTIONS IN EMBRYOS.
AU DESSAIN S; GROSS C T; KUZIORA M A; MCGINNIS W
CS DEP. BIOL., BIOPHYSICS AND BIOCHEMISTRY YALE UNIV., NEW HAVEN, CONN.
06511, USA.
SO EMBO (EUR MOL BIOL ORGAN) J, (1992) 11 (3), 991-1002.
CODEN: EMJODG. ISSN: 0261-4189.
FS BA; OLD
LA English
AB Much of the functional specificity of Drosophila homeotic selector proteins, in their ability to regulate specific genes and to assign specific segmental identities, appears to map within their different, but closely related homeodomains. For example, the Drosophila Dfd and human HOX4B (Hox 4.2) proteins, which have extensive structural similarity only in their respective homeodomains, both specifically activate the Dfd promoter. In contrast, a ***chimeric*** Dfd protein containing the Ubx ***homeodomain*** (Dfd/Ubz) specifically activates the ***Antp*** P1 promoter, which is normally targeted by Ubx. Using a variety of DNA binding assays, we find significant differences in DNA binding preferences between the Dfd, Dfd/Ubx and Ubx proteins when Dfd and ***Antp*** upstream regulatory sequences are used as binding substrates. No significant differences in DNA binding specificity were detected between the human HOX4B (Hox 4.2) and Drosophila Dfd proteins. All of these full-length proteins bound as monomers to high affinity DNA binding sites, and interference assays indicate that they interact with DNA in a way that is very similar to ***homeodomain*** polypeptides. These experiments indicate that the ninth amino acid of the recognition helix of the homodomain, which is glutamine in all four of these ***Antp*** -type ***homeodomain*** proteins, is not sufficient to determine their DNA binding specificities. The good correlation between the in vitro DNA binding preferences of these four ***Antp*** -type ***homeodomain*** proteins and their ability to specifically regulate a Dfd enhancer element in the embryo, suggests that the modest binding differences that distinguish them make an important contribution to their unique regulatory specificities.

L10 ANSWER 13 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
9
AN 1993:117506 BIOSIS
DN PREV199395081606
TI POU-specific domain of Oct-2 factor confers "octamer" motif DNA binding specificity on heterologous Antennapedia ***homeodomain*** .
AU Brugnera, Enrico; Xu, Licen; Schaffner, Walter; Arnosti, David N.
CS Inst. Molecular Biol. II, Univ. Zurich, Winterthurerstrasse 190, CH-8057 Zurich Switzerland
SO FEBS (Federation of European Biochemical Societies) Letters, (1992) Vol. 314, No. 3, pp. 361-365.
ISSN: 0014-5793.
DT Article
LA English
AB The bipartite DNA binding domain of the POU family of transcription factors contains a 'POU-specific' domain unique to this class of factors and a 'POU ***homeodomain*** ' homologous to other homeodomains. We compared DNA binding of the Oct-2 factor POU domain and the Antennapedia ( ***Antp*** ) ***homeodomain*** with a ***chimeric*** Oct-2/ ***Antp*** protein in which the distantly related ***Antp*** ***homeodomain*** was substituted for the Oct-2 POU ***homeodomain*** . The Oct-2/ ***Antp*** ***chimeric*** protein bound both the octamer and the ***Antp*** sites efficiently, indicating that DNA binding specificity is contributed by both components of the POU domain.

L10 ANSWER 14 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
10
AN 1991:49773 BIOSIS
DN BA91:28054
TI THE DNA BINDING SPECIFICITY OF THE DROSOPHILA FUSHI TARAZU PROTEIN A
POSSIBLE ROLE FOR DNA BENDING IN ***HOMEODOMAIN*** RECOGNITION.
AU NELSON H B; LAUGHON A
CS LAB. GENETICS, UNIV. WIS.-MADISON, MADISON, WIS. 53706.
SO NEW BIOL, (1990) 2 (2), 171-178.
CODEN: NEBIE2. ISSN: 1043-4674.
FS BA; OLD
LA English
AB Segmentation in Drosophila melanogaster is controlled by a network of interacting genes, many of which encode a ***homeodomain*** that confers sequence-specific binding to DNA. One of these, fushi tarazu (ftz), is a transcription factor that regulates a number of segmentation and homeotic genes, including Antennapedia ( ***Antp*** ). To determine the DNA binding specificity of the ftz ***homeodomain*** , we performed DNase I footprint analysis on ftz protein binding sites located near the two ***Antp*** promoters using a .beta.-galactoside/ftz ***fusion*** protein synthesized in E. coli. A consensus sequence for the ***fusion*** protein's preferred binding site was derived from 19 sites.

The consensus sequence contains an ATTA motif, as do the reported consensus sequences for the engrailed (en), even-skipped (eve), and bicoid (bcd) Drosophila ***homeodomain*** proteins. We propose DNA bending as an explanation for the presence of a shared motif between proteins with divergent recognition helices: according to this model, bases in ATTA would not directly contact amino acid side chains of the recognition helix but rather would be necessary for bending of the DNA around the ***homeodomain*** , perhaps facilitating important protein-DNA contacts.

=> d his

(FILE 'HOME' ENTERED AT 11:58:31 ON 17 SEP 2002)

FILE 'BIOSIS, EMBASE, CAPLUS' ENTERED AT 11:58:39 ON 17 SEP 2002
L1 17436 S ANTP OR ANT
L2 127 S L1 AND CONJUGAT?
L3 1 S L2 AND DISULFIDE BOND
L4 62 S L2 AND PY<=1997
L5 52 DUP REM L4 (10 DUPLICATES REMOVED)
L6 0 S L5 AND HOMEODOMAIN
L7 204 S L1 AND HOMEODOMAIN
L8 0 S L7 AND CONJUGAT?
L9 33 S L7 AND (FUSION OR CHIMER?)
L10 14 DUP REM L9 (19 DUPLICATES REMOVED)

=> d bib abs l5 1-10

L5 ANSWER 1 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1997:623188 CAPLUS
DN 127:288167
TI Lytic peptides and pharmaceutical compositions and uses thereof
IN Rivett, Donald Edward; Hudson, Peter John; Werkmeister, Jerome Anthony
PA Commonwealth Scientific and Industrial Research Organisation, Australia; Rivett, Donald Edward; Hudson, Peter John; Werkmeister, Jerome Anthony
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9733908 | A1 | 19970918 | WO 1997-AU160 | 19970313 <-- |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2248782 | AA | 19970918 | CA 1997-2248782 | 19970313 <-- |
| AU 9719170 | A1 | 19971001 | AU 1997-19170 | 19970313 <-- |
| AU 723904 | B2 | 20000907 | | |
| ZA 9702186 | A | 19971110 | ZA 1997-2186 | 19970313 <-- |
| EP 901502 | A1 | 19990317 | EP 1997-906936 | 19970313 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001517201 | T2 | 20011002 | JP 1997-532123 | 19970313 |
| PRAI AU 1996-8614 | A | 19960313 | | |
| WO 1997-AU160 | W | 19970313 | | |

AB The invention provides a peptide with lytic activity, having an amphipathic .alpha.-helix of sufficient length and character to allow the peptide to function lytically, wherein the amino-terminal and/or carboxyl-terminal of the peptide comprises .gtoreq.1 moieties which result in an increased pos. charge compared to the charge of a peptide of identical amino acid sequence and structure but not comprising the moiety. Methods of activation to provide activity and for inactivation of lytic activity, pharmaceutical comps., and methods of treatment of e.g. cancer are described. The lytic peptides of the invention may be targeted to specific cells, e.g. by linking to a targeting moiety such as an antibody. The peptides may also be used in biosensors. Prepd. peptides were tested for hemolytic activity as well as for their effect on CEM T-cell lymphoma cells.

L5 ANSWER 2 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1997:251127 CAPLUS
DN 126:330718
TI Characterization of Vinyl-Substituted, Carbon-Carbon Double Bonds by GC/FT-IR Analysis
AU Svatos, Ales; Attygalle, Athula B.
CS Baker Laboratory Department of Chemistry, Cornell University, Ithaca, NY, 14853, USA
SO Analytical Chemistry ( ***1997*** ), 69(10), 1827-1836
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB Vapor phase IR spectra allow the detn. of the stereochem. of carbon-carbon double bonds ***conjugated*** with a vinyl group. Cis and trans isomers of unsubstituted 1,3-alkadienes can be differentiated on the basis of the differences obsd. in the 900-1000 cm-1 region (spectra of cis isomers show two bands at 993 and 906 cm-1, while those of trans compds. show three absorptions at 998, 949, and 902 cm-1) and the 1590-1650 cm-1 region (the C:C stretch bands are obsd. at 1595 and 1642 cm-1 for cis compds. and at 1604 and 1650 cm-1 for trans compds.). Compds. bearing CH2:CHC(CH3):CHCH2- and CH2:CHC(:CH2)CH2- structural moieties, referred to as .alpha.- and .beta.-type compds., are frequently encountered as natural products. For compds. bearing .alpha.-type groups, the cis/trans configuration of the trisubstituted double bond can be detd. unambiguously. An absorption at 3095-3091 cm-1, for the :CH2 stretch vibration, is common to both of these groups; however, due to the presence of two :CH2 groups, the relative intensity of the band is much higher for .beta.-type compds. For .alpha.-type compds., a cis configuration at the C-3 carbon atom is characterized by a :CH2 wag absorption at 907-906 cm-1. For .beta.-type compds. and 3E-.alpha.-type compds., this band appears at 899-897 cm-1. In addn., a wavy "fingerprint" pattern with two min. at 1632 (low intensity) and 1595-1594 cm-1 (high intensity) is characteristic for .beta.-type compds. Our generalizations are based on spectra of cis and trans ocimene, myrcene, and dehydration products of many 3-methyl-1-alken-3-ols. Six isomers of farnesene can be characterized by GC/FT-IR. Furthermore, gas-phase IR allows the detn. of the configuration of the trisubstituted double bond at C-3 in .alpha.-type farnesene congeners. For example, the homo- and bishomofarnesene isomers from Myrmica ants were shown to include a 3Z bond.

L5 ANSWER 3 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1997:282891 CAPLUS
DN 126:329436
TI Haptenic side chains as posttranslational IgE-binding determinants among pollen protein allergens
AU Berrens, L.; Luis, A.M.
CS Research Laboratories CBF LETI, Madrid, E-28760, Spain
SO International Archives of Allergy and Immunology ( ***1997*** ), 113(1-3), 236-237
CODEN: IAAIEG; ISSN: 1018-2438
PB Karger
DT Journal
LA English
AB As pollen proteins may owe their allergenicity to low-mol. wt. compds. of defined chem. structure assocd. as haptenic side chains to carrier proteins, the authors examd. the interaction of weakly allergenic < 10 kD components from pollen exts. with suitable > 10 kD non-allergenic protein carriers. Aq. exts. of Betula alba pollen were reacted with Corylus avelana or Urtica dioica proteins. The resulting hapten-protein ***conjugates*** exhibited considerable capacity to react with human ***ant*** -Betula IgE antibodies relative to parent proteins. Similarly, artificial adducts of low-mol. wt. Betula components and milk whey proteins acquired the specific IgE-binding properties of the natural Betula allergens. UV spectroscopic anal. demonstrated the presence of ***conjugated*** or strongly absorbed (3',4'-biphenolic) flavonols.

L5 ANSWER 4 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1997:8136 CAPLUS
DN 126:114711
TI The study of rare earth metals - ligands - DNA ternary interactions
AU Ihara, T.; Sueda, S.; Kumasaki, A.; Tsuji, H.; Takagi, M.
CS Dep. of Chemical Science and Technology, Kyushu University, Fukuoka, 812-81, Japan
SO Kidorui ( ***1996*** ), 28, 60-61
CODEN: KIDOEP; ISSN: 0910-2205
PB Nippon Kidorui Gakkai
DT Journal
LA Japanese/English
AB Recently, it was revealed that rare earth metals, in particular Ce(IV), significantly catalyzed the hydrolysis of DNA phosphodiester bond. Then, it has been recognized the requirement of developing new DNA ligands for locating metal ions to appropriate loci on DNA, in which it is desirable that the interaction of the ligands with the metal increase the hydrolytic activity of the metal or, at least, does not suppress it seriously. For this purpose, we synthesized anthraquinone - crown ether ( ***ant*** -crown) and - sugar ( ***ant*** -D/L-glc) ***conjugates*** as DNA ligands. The DNA ligands enhanced the DNA cleaving activity of lanthanoid ions in a synergistic way. DNA cleaving activities of these metal ions were appreciably diminished by ***ant*** -ida, which had iminodiacetic acid as a metal binding site. These results were explicable by Lewis acidity or residual coordination sites of centered metal in the complex with DNA ligands. Although these tendency is common in traditional study on the org. ester hydrolysis by using metal ion as a catalyst, the results obtained here is the first example of systematic study of the chelator effect of ***conjugated*** DNA ligand on the rare earth metal catalyzed DNA hydrolysis.

L5 ANSWER 5 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 1995:510878 BIOSIS
DN PREV199598515928
TI Differential expression of cytokine genes in cervical cancer tissues.
AU Pao, Chia C. (1); Lin, Chieh-Yu; Yao, Ding-Shyan; Tseng, Chih-Jen
CS (1) Dep. Biochem., Chang Gung Coll. Medicine Technol., 259 Wenhwa Road, Kweishan, Taoyuan Taiwan
SO Biochemical and Biophysical Research Communications, (1995) Vol. 214, No. 3, pp. 1148-1151.
ISSN: 0006-291X.

DT Article
LA English
AB The expression of genes coding for inflammatory cytokine interleukin-1-alpha (IL-1-alpha), IL-6, interferon-y and tumor necrosis factor-alpha from 15 normal cervix, 11 cervical intraepithelial neoplasia and 13 cervical cancer tissues was investigated. The cytokine messenger ribonucleic acids were reverse transcribed and amplified in the presence of biotinylated and dinitrophenylated primers. Amplified DNA was then captured onto streptavidin-coated microwell plate and quantitatively measured in a colorimetric reaction using ***ant*** -DNP antibodies ***conjugated*** to horse radish peroxidase. There is no change of IL-1-alpha, IL-6 and tumor necrosis factor-alpha gene expression in either cervical intraepithelial neoplasia or cervical cancer tissues. But the transcription of interferon-gamma gene is significantly reduced in both cervical intraepithelial neoplasia and cervical cancer tissues as compared to normal cervix. This study demonstrated that reverse transcription and quantitative polymerase chain reaction coupling to colorimetric microwell plate assay is a sensitive and useful method to quantitate multiple cytokine gene expression. Our results also suggest that cervical epithelial cells are capable to express cytokines and that interferon-gamma may play a role in the pathogenesis of cervical cancer since its reduced expression may influence inflammation and immunity of the cervical tissues.

L5 ANSWER 6 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1995:750114 CAPLUS
DN 123:165697
TI Expression of Gal.beta.1,4GlcNAc .alpha.2,6-sialyltransferase and .alpha.2,6-linked sialoglycoconjugates in normal human and rat tissues
AU Kaneko, Yoichi; Yamamoto, Hirotaka; Colley, Karen J.; Moskal, Joseph R.
CS Chicago Inst. Neurosurgery and Neuroresearch, Chicago, IL, USA
SO Journal of Histochemistry and Cytochemistry ( ***1995*** ), 43(9), 945-54
CODEN: JHCYAS; ISSN: 0022-1554
PB Histochemical Society, Inc.
DT Journal
LA English
AB Histochem. studies were performed on normal human and rat tissues using anti-Gal.beta.1,4GlcNAc .alpha.2,6-sialyltransferase (.alpha.2,6-ST) antibody and Sambucus nigra agglutinin (SNA). .alpha.2,6-ST and its products were detected in almost all tissues examd. However, the staining intensities varied significantly with different cell types. Some secretory epithelial cells, such as hepatocytes and choroid plexus cells, were vividly stained with either ***ant*** -.alpha.2,6-ST or SNA. In several cell types the intensity of .alpha.2,6-ST staining did not always correlated with SNA stainability. Neurons and gastrointestinal epithelia were rarely stained with SNA, even though they were pos. for .alpha.2,6-ST. In contrast, the endothelial cells of blood vessels strongly reacted with SNA despite their weak .alpha.2,6-ST expression. The precise physiol. roles played by .alpha.2,6-linked sialylated glycoconjugates have been unclear. However, the findings described here lend further support to their important role in cell growth and differentiation, since immature blood cells, including megakaryocytes in bone marrow, were intensely stained with anti-.alpha.2,6-ST and SNA, and SNA reaction products were primarily obsd. in the basal and suprabasal layers of the stratified epithelia rather than in the more differentiated upper layers. In view of the vivid reactivity of anti-.alpha.2,6-St in the decidual cells of the placenta, it seems likely that .alpha.2,6-ST expression is under hormonal control.

L5 ANSWER 7 OF 52 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 95271551 EMBASE
DN 1995271551
TI Identification of variant glycophorins of human red cells by lectinoblotting: Application to the Mi.III variant that is relatively frequent in the Taiwanese population.
AU Wu A.M.; Duk M.; Lin M.; Broadberry R.E.; Lisowska E.
CS Glycoimmunochemistry Research Lab., Inst. of Molecular/Cellular Biology, Chang-Gung Coll. of Med./Technology, Kwei-san,Taoyuan 33332, Taiwan,Province of China
SO Transfusion, (1995) 35/7 (571-576).
ISSN: 0041-1132 CODEN: TRANAT
CY United States
DT Journal; Article
FS 025 Hematology
029 Clinical Biochemistry
LA English
SL English
AB Background: Detection of normal and variant glycophorin electrophoretic bands with T- and Tn-specific lectins is based on the possibility of glycophorin transformation into T or Tn antigens by simple chemical modifications in the blot. Study Design and Methods: Human red cell membrane proteins were fractionated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and blotted onto nitrocellulose. The blots were submitted to mild acid hydrolysis (desialylation of glycophorins exposing T antigens) and then to Smith degradation (degalactosylation of asialo-glycophorins exposing Tn antigens). The modified glycophorin bands were detected with biotinylated lectins and horseradish peroxidase- ***conjugated*** avidin. Results: The lectins from Artocarpus integrifolia (jacalin, anti-T/Tn), Amaranthus hybridus (anti- T), Salvia sclarea (anti-Tn), and Vicia villosa (anti-Tn) were used. The lectins detected normal glycophorin bands in control and variant red cells and characteristic additional bands in Mi.III (GP. Mur) red cells. The sensitivity of the method s comparable to that obtained by immunoblotting with glycophorin monoclonal antibodies. Comparison of the electrophoretic mobility of normal and vat ***ant*** bands is helpful in the classification of glycophorin variants. Conclusion: Lectinoblotting, based on carbohydrate recognition, enables the detection in a red cell sample, with high sensitivity of all normal and variant glycophorin bands. The method can be also applied to other purposes, such as the identification of poly-O- glycosylated glycoproteins in other cells or the characterization of glycosylation of glycophorins and other poly-O-glycosylated proteins.

L5 ANSWER 8 OF 52 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 95253688 EMBASE
DN 1995253688
TI Immunohistochemical localization of neuronal nicotinic receptor subtypes at the pre- and postjunctional sites in mouse diaphragm muscle.
AU Tsuneki H.; Kimura I.; Dezaki K.; Kimura M.; Sala C.; Fumagalli G.
CS Department Chemical Pharmacology, Faculty Pharmaceutical Sciences, Toyama
Medical/Pharmaceutical Univ., 2630 Sugitani,Toyama 930-01, Japan
SO Neuroscience Letters, (1995) 196/1-2 (13-16).
ISSN: 0304-3940 CODEN: NELED5
CY Ireland
DT Journal; Article
FS 001 Anatomy, Anthropology, Embryology and Histology
002 Physiology
LA English
SL English
AB The existence of neuronal nicotinic acetylcholine receptor (nAChR) subunits was investigated in the cryostat sections of mouse diaphragm muscles using the indirect immunofluorescence technique. The specific immunolabelings with monoclonal antibodies (mAbs) to .beta.2 and to .alpha.8 subunits of neuronal nAChR were observed at the endplate determined by labeling with a fluorescent dye (BODIPY)- ***conjugated*** .alpha.-bungarotoxin. The immunoreactivity of mAb to the .alpha.3 subunit of neuronal nAChR was detected on the motor nerve fibers including the nerve terminals. These results provide evidence that the subtypes of postsynaptic nAChR, recognized by the ***ant*** -.beta.2 and/or anti-.alpha.8 mAbs, and the presynaptic nAChR recognized by the anti-.alpha.3 mAb, are present at the neuromuscular junction, in addition to the classical muscle nAChR.

L5 ANSWER 9 OF 52 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 2
AN 94134639 EMBASE
DN 1994134639
TI Development of an enzyme-linked immunosorbent assay for measurement of fire ***ant*** venom-specific IgE.
AU Ponder R.D.; Stafford C.T.; Kiefer C.R.; Ford J.L.; Thompson W.O.; Hoffman D.R.
CS Allergy-Immunology, Medical College of Georgia,Augusta, GA 30912, United States
SO Annals of Allergy, (1994) 72/4 (329-332).
ISSN: 0003-4738 CODEN: ANAEA3
CY United States
DT Journal; Article
FS 026 Immunology, Serology and Transplantation
LA English
SL English
AB An enzyme-linked immunosorbent assay (ELISA) was developed for in vitro measurement of IgE specific for Solenopsis invicta venom. Enhanced binding microtiter plates were coated with S. invicta venom protein and incubated with sera from fire ***ant*** allergic patients and control subjects. Bound IgE was tagged with peroxidase- ***conjugated*** monoclonal anti-IgE and quantitated with the substrate/indicator system H2O2/tetramethylbenzidine. Absorbance (620 nm) represented venom-specific IgE values. The ELISA correlated well with the imported fire ***ant*** venom RAST ($r = .87$, $P < .0001$). Using skin test reactivity as the standard measure of venom-specific IgE, the venom ELISA appeared to be a sensitive in vitro assay comparable to venom RAST. ELISA is less expensive than RAST and does not require licensing or handling of radioisotopes.

L5 ANSWER 10 OF 52 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 95053594 EMBASE
DN 1995053594
TI [Epidemiological and resistance markers to chloramphenicol in Yersinia enterocolitica O:3 isolates].
MARCADORES EPIDEMIOLOGICOS Y RESISTENCIA A CLORAMFENICOL EN AISLAMIENTOS
DE YERSINIA ENTEROCOLITICA SEROGRUPO O:3.
AU Castillo F.J.; Gomez-Lus P.; Adrian F.; Rabanos E.; Vergara Y.; Gomez-Lus R.
CS Departamento de Microbiologia, Facultad de Medicina, Universidad de Zaragoza, C/Domingo Miral s/n,50009 Zaragoza, Spain
SO Revista Espanola de Quimioterapia, (1994) 7/4 (313-318).
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037 Drug Literature Index
LA Spanish
SL Spanish; English

AB The antibiotic susceptibility of 145 strains of Yersinia enterocolitica 4/O:3 isolated from patients between 1979 and 1993 was studied. They were resistant to ampicillin, ticarcillin and cephalothin, and susceptible to other .beta.-lactams, quinolones, colistin, tetracyclines, kanamycin, gentamicin, tobramycin and amikacin. Forty strains (27.58%) were resistant to streptomycin (Sm) and sulfamides (Su), and thirty (20.68%) to Sm, Su and chloramphenicol (Cm). Since 1988 the resistance to Cm has increased, and is due to chloramphenicol acetyltransferase production. The resistance to streptomycin was either not enzymatic or was due to the production of a modifying enzyme APH (3") or ***ANT*** (3") (9). Antibiotic resistance was not transferred by ***conjugation*** . All isolates harbored the virulence plasmid (64 Kb). A small plasmid (5 Kb) was detected in some Sm, Su resistant strains. Analysis by ribotyping wasn't able to establish any genetic difference among the strains. Markers such as antimicrobial resistance, plasmid profile analysis or the study of the resistance mechanism led us to differentiate seven subtypes. It seems that the high percentage of chloramphenicol resistance is because of the emergence and prevalence of two Cm resistant subtypes.

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---Logging off of STN---

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Executing the logoff script...

=> LOG Y

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